THE ALPS



DESCRIBED BY W MARTIN CONWAY

PAINTED BY A D McCORMICK

THE ALPS

AGENTS IN AMERICA
THE MACMILLAN COMPANY
66 FIFTH AVENUE, NEW YORK



HAYMAKERS IN THE VAL MAGGIA

The loads carried by the women are enormous in size, what they are in weight I don't know; but many of them are larger than those shown in the picture. One load I measured was twice the height of the woman.

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LONDON
ADAM AND CHARLES BLACK
1904

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THE ALPS

CHAPTER I

THE TREASURES OF THE SNOW

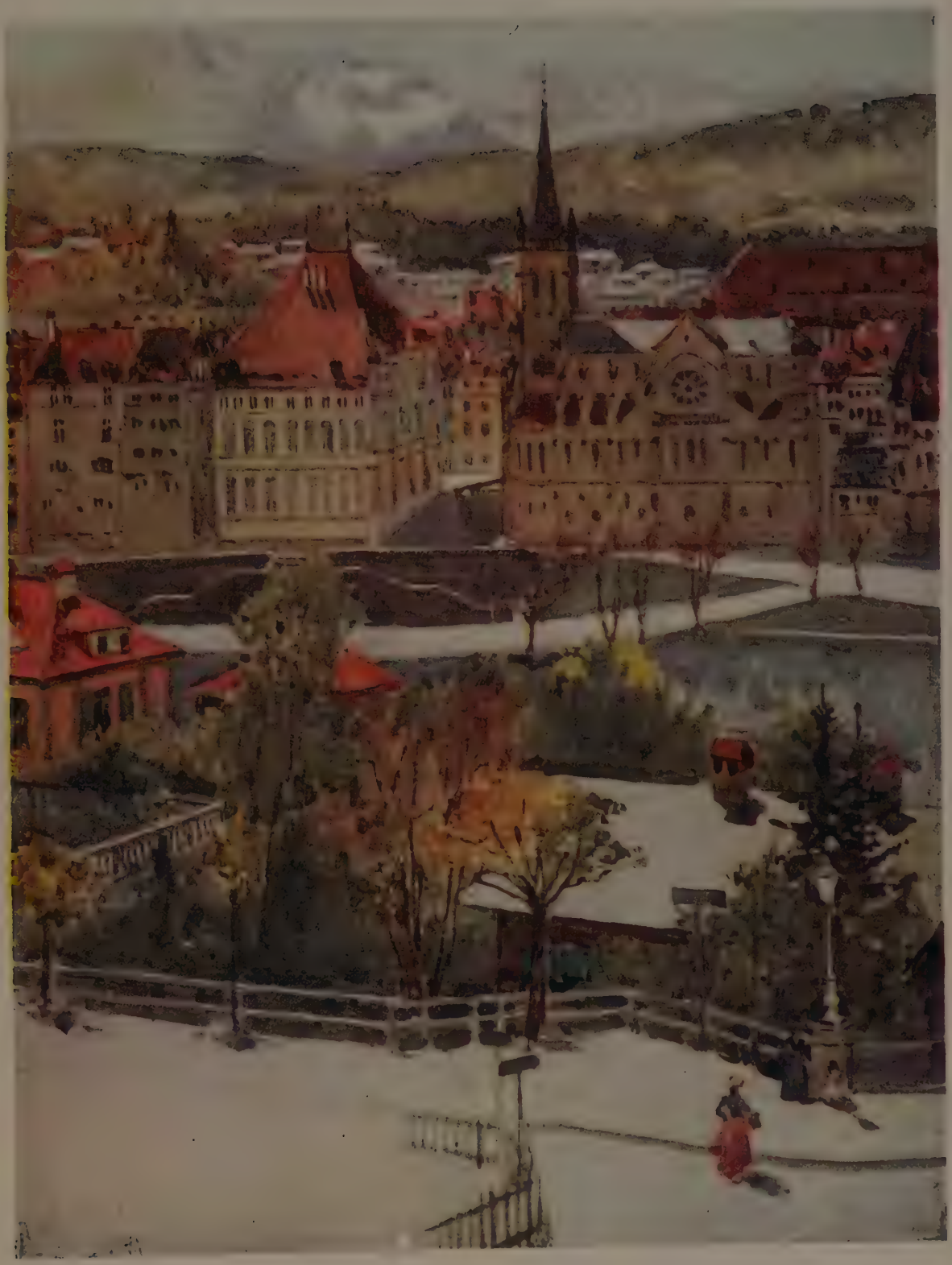
JOHN RUSKIN, in a fine and famous passage, describes the effect of a first view of the Alps upon a young and sensitive mind. He was at Schaffhausen with his parents. "We must have spent some time in town-seeing," he writes, "for it was drawing towards sunset when we got up to some sort of garden promenade—west of the town, I believe; and high above the Rhine, so as to command the open country across it to the south and west. At which open country of low undulation, far into blue—gazing as at one of our own distances from Malvern of Worcestershire, or Dorking of Kent, — suddenly — behold — beyond! There was no thought in any of us for a moment of their being clouds. They were clear as crystal, sharp on the pure horizon sky, and already tinged with rose by the sinking sun. Infinitely beyond

all that we had ever thought or dreamed,—the seen walls of lost Eden could not have been more beautiful to us; not more awful, round heaven, the walls of sacred Death. It is not possible to imagine, in any time of the world, a more blessed entrance into life, for a child of such a temperament as mine."

Many a lad or man has felt a similar awakening when the snowy Alps first smote upon his vision, though none has ever so nobly expressed the emotion. It is a feeling not to be forgotten in after life. All who love mountains have begun to love them from some remembered moment. We may have known the hills from infancy, but to know is not necessarily to love. It is the day of awakening that counts. To me the hills were early friends. Malvern of Worcestershire was my childish delight. I climbed Snowdon at the age of seven, and felt the delight that arises from standing high and gazing far. But the mountains as beautiful things to look at came later. Well do I remember the year when I was at last going to the Alps. A vague feeling of expectation and suspense pervaded the summer term—the unknown was in the future and hovered there as something large and bright. What would

BERN FROM THE SCHÄNZLI

The seat of the Swiss Government. The Rathhaus, a modern "old Catholic church," in centre of picture. The Bernese Oberland Mountains in heat-haze at top.



the great snow mountains look like? That was the abiding question. One June day I was idly lying prone upon a grassy bank, watching piled masses of cumulous cloud tower in the east with the afternoon sun shining splendidly upon them. Could it be that any snow mountains were really as fine as clouds like these? I could not believe it.

At last the day came when the sea was crossed and the long railway journey (how long it seemed!) was accomplished. We approached Olten. The Oberland ought to have appeared, but only rain fell. We reached Bern, and drove up to the little country village of Zimmerwald, where my friends were staying; still there was no distant view—nothing but wooded and green hills around, that reminded me of other views, and revealed no such startling novelty as I was awaiting. One day passed and then another. On the third morning the sun rose in a sky perfectly clear. When I looked from my window across the green country, and over the deep-lying lake of Thun, I saw them—"suddenly—behold—beyond!" Jungfrau, Mönch, Eiger, and the rest, not yet individuals for me, not for a long time yet, but all together, a great white wall, utterly unlike any dream of

them that had visited me before, a new revelation, unimaginable, indescribable, there they stood, and from that moment I also entered into life.

Returned to my school friends in due season, I thought to tell them of this new and splendid joy that had come to me, but a few attempts cured me of any such endeavour. It was impossible. My words fell upon deaf ears, or rather I had no words. What I said failed to raise a picture in their minds, as what had before been said to me had failed. I have never repeated the attempt; I shall not do so now. The prophet who saw the vision of the Almighty could speak only by aid of types and shadows. The great revelations of nature's majesty are not describable. Who that had never seen a thunderstorm could learn its majestic quality from description? Who can enter into the treasures of the snow by way of words? The glory of a great desert must be seen to be realised. The delicate magnificence of the Arctics none can translate into language. We may speak of that we do know, and testify that we have seen, but no one receives our testimony, because words cannot utter the essential facts.

In writing about the Alps, therefore, we write and paint primarily to remind those who know;

VIEW OF THE BERNESE ALPS FROM THE
GURTEN, NEAR BERN



to suggest further visions of a like character to those they possess within themselves. Even the greatest master of descriptive writing can only manifest his mastership by knowing what to omit and where to stop. "Suddenly—behold—beyond!" That is enough for those who know. For those who do not know, no words can embody and transmit the unfelt emotion.

Since the first day when I saw the snowy mountains, I have seen them again and again in all parts of the world, and have come to know them from above as well as from below. I have penetrated them in all directions and grown to understand the meaning of their smallest details of couloir, crevasse, ice-fall, cornice, arête, and bergschrund. It has not been all gain. Gladly would some of us be able to shed our knowledge of detail, if it were but for a moment, and once again behold the great wall of white as ignorantly as we first beheld it—a thing, vast, majestic, and above all mysterious — unapproachable as the clouds — a region not for men but fairies—the rose-clad tops of the mountains where dance the spirits of the dawn. Fairest of all is ever the first vision, not completest. Later we know more, we understand more, we may even come to love more, but the

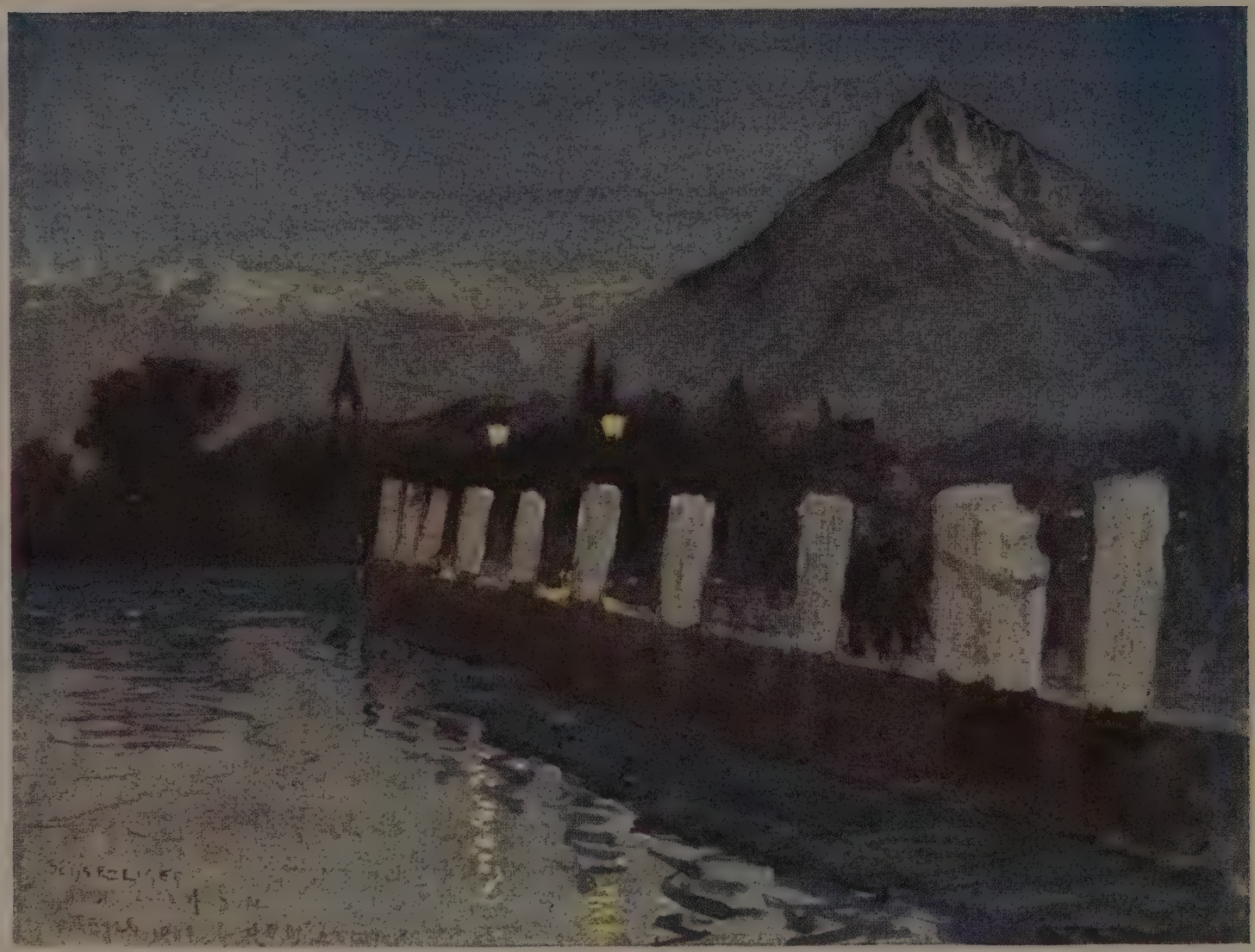
first vision of a young man's love is surpassed by no future splendour, and the first glory of a mountain view never comes again.

Doubtless there may exist some people who, even if they had been smitten by the glory of the mountains in the age of their own most abounding youthful powers of body, would not have been attracted to climb them; yet such folks must be rare. Those who first see mountains in the years of their solid maturity naturally escape the attraction. But most young and healthy individuals as naturally desire to climb as they do to swim or to wander. The instinct of man is to believe that joy is somewhere else than where he stands. "Dort wo du nicht bist, dort ist das Glück." It is not true, but life is not long enough to teach us that it is not—and fortunately, else were half our efforts quenched in the impulse.

To see round, over, and beyond—that is the natural desire of all. We want to go everywhere, to behold everything. Who would not rush to visit the other side of the moon, were such journey possible? If Messrs. Cook were to advertise a trip to Mars, who would not be of the party? "To see round, over, and beyond"—that is a common human instinct, which accounts for the passion of

THE PIER AT SCHERZLIGEN, LAKE OF THUN—EVENING

The Niesen on the right.



historical and scientific investigation, for the eagerness of politicians, for the enthusiasm of explorers and excavators, for the inquisitiveness of psychical societies, for the prosperity of fortune-tellers, and for the energy of mountaineers. What! There is a height looking down on me and I cannot attain it? There is a mountain wall around me and I cannot look over it? Perish the thought! There is an historical limit behind which I know nothing about the human race? Give me a spade, that I may dig out some yet earlier ancestor and discover something about him. There is an unmapped region at the south pole? What is my Government made of that it does not send forth an expedition to describe it?

In face of the unknown all men are of one mind. They cannot but endeavour to replace ignorance by knowledge. What is true of the mass is true to some extent of each individual. There exists in the unit the same tendency at all events as in the multitude. Each man wants to see what he has not seen, to stand where he has not stood, to learn more than he knows. In the presence of mountains this desire urges him upward. He does not start as a mountaineer intending to climb, and climb. He starts for a single expedition, just to see

what high peaks and glaciers are like. The snowy regions beheld from a distance puzzle him. Evidently they are not like the places he is familiar with. He will for once go and take a nearer look. He will climb somewhither and get a sight all round. Little does he suspect what the outcome of his venture may be. A week ago he was perhaps laughing at the tattered-faced climbers he met, as mad fools, going up to mountain-tops just to come down again and say they had been there. Of such folly he at any rate will never be guilty. Climbing has no fascinations for him; he is merely going to have a look at the white world, so that he may know what it is that he hears people talking about—their corridors and their couloirs, crevasses, snow-bridges, séracs, and bergschrunds.

So he hires a guide and sets forth for the Breithorn, perhaps, or some such high and safe-reputed peak. He hits upon a day when the weather turns bad. Winds buffet him; rain and snow drench him; he labours through soft snow; he is bewildered by fog. If the sun shines for a few moments, it is only long enough to scorch the skin off his face and ensure him a few days of great discomfort to follow. He has no view from the summit. He returns wearied out to his inn.

MELCHIOR ANDEREGG

Born 1828. A celebrated Alpine guide; with the late Sir Leslie Stephen made many first ascents, including the Rympfischhorn, Alphubel, Oberaarhorn. Also well known for his wood-carving.



Yes!—and thenceforward the alpine fever masters him. He is caught and makes no effort to escape. His keenest desire is to be off once more into those same high regions—once more to feel the ice beneath his feet—once more to scramble up clean crags fresh from nature's sculpturing and undefiled by soil or vegetation. With each new ascent he becomes eager for more. The summers are all too short for his satisfaction. He goes home to read about other people's climbs, to study maps and guide-books, to lay out schemes for future seasons. Dauphiny, the Graians, the Engadine and Tirol—he must give a season or seasons to each. Thus is the climber fashioned out of an ordinary man.

Each new votary of the peaks in turn experiences the same sudden conversion, expects to be able to explain his new delight to his lowland friends, and in turn discovers the same impossibility. He learns, as we all have learned, that the delight is not translatable into words; that each must experience it for himself and each must win his own entrance into the secret alone. The most we can do is to awaken the inquisitive sense in another, who beholds the visible evidence of our enjoyment and wonders what its source may be. In that fashion the infection can be

spread, and is spread with the extraordinary rapidity that the last half-century has witnessed.

What climber does not recall the enthusiasm of his first seasons? the passionate expectation of the coming summer, the painful awaiting for the moment when his foot should once again crunch the ice-corn of the glacier beneath its hob-nailed sole? Gradually that enthusiasm passes and is replaced by a settled mood of calmer, but no less intense, satisfaction. But does the æsthetic delight in the beauty of the mountains remain through all these experiences undimmed? Not always. In the first view of them it is the beauty of the snowy peaks, of the great white walls, that appeals to the eye. Ignorant of the meaning of every detail, the details are almost unseen. It is the whole that is beheld in the glory of its whiteness. The wonder of the silver snow beyond the green and beneath the sky invades the mind of every new spectator. Small need be our surprise that unsophisticated, semi-civilised peoples have always believed the snowy regions to be part of the other world—the home of ghosts and fairies, or of demons and dragons. "Not more awful, round heaven, the walls of sacred Death," says Ruskin in the passage above quoted, thereby manifesting

STORM COMING UP OVER LAKE OF LUCERNE

Sketch made from Flüelen.



how close in its instincts is the sympathy between genius and the purely natural man. Almost universal is the feeling aroused by a first sight of a great snowy range that it is unearthly. Mystery gathers over it. Its shining majesty in full sunlight, its rosy splendours at dawn and eve, its pallid glimmer under the clear moon, its wreathed and ever-changing drapery of cloud, its terrific experiences in storm, all these elements and aspects strike the imagination and appeal broadly to the æsthetic sense. Nor are they ever quite forgotten even by the most callous of professional mountaineers.

But with increase of experience on the mountains themselves come knowledge and a whole group of new associations. A man does not climb a mountain without bringing some of it away with him and leaving something of himself upon it. Returned to the level and looking back, he does not see his peak as before. Every feature of the road he traversed is remembered, and he instinctively tries to fit the features to the view. That velvet slope above the trees is the stony tract up which he toiled before dawn and where he stumbled in the fitful lantern-light. That grey band beside the glacier is the moraine, whose big

rocks were unstable beneath his tread. That glacier—how slippery it was before the sun smote it! There are the crevasses that made his track so devious; and there began the snowfield so hard and pleasant under foot in the early hours, so toilsome to wade through as the day advanced. In the upper part of the mountain all the little features, that seemed unimportant from below, take on a new meaning. He finds it hard to identify different points. Can that tiny thread of snow be the broad gully up which so many steps had to be cut? He looks at it through a telescope, and the actual traces of his staircase become visible. The mountain judged by the scale of remembered toil grows wonderfully in height. The eye thus trained begins to realise and even to exaggerate the vast scale on which peaks are built. But along with this gain in the truthful sense of scale comes the loss of mystery. The peak which was in heaven is brought down to earth. It was a mere thing of beauty to be adored and wondered at; it has become something to be climbed. Its details have grown intelligible and interesting. The mind regards it from a new aspect, begins to analyse its forms and features, and to consider them mainly in their

relation to man as a climber. As knowledge grows this attitude of mind develops. Each fresh peak ascended teaches something. The nature of the climbing on peaks not yet ascended can to some extent be estimated from below. The inquiry naturally arises, How shall that peak be climbed? Which is the way to attack it? The eye traces possible routes and foresees probable difficulties. It rejects or modifies proposed ways. It observes all kinds of structural details. It notes the path of avalanches and the signs of falling stones. It concentrates its attention upon ice-falls and endeavours to thread the maze of their séracs. Thus the intelligence replaces the æsthetic sense and the enjoyment of beauty becomes or is liable to become dimmed.

The longer a climber gratifies his instincts and pursues his sport, the larger becomes his store of reminiscences and the greater his experience. If he confines his attention to a single range of mountains such as the Alps, he is almost always in sight of mountains he has climbed and glaciers he has traversed. Each view shows him some route he has once pursued, some glacier basin he has explored, some pass he has crossed. The labyrinth of valleys and the crests of successive ridges do not

puzzle him. He knows how they are grouped and whither they lead. Beyond those mountains is the Zermatt valley; that peak looks down on Zinal; that col leads to Saas. Thus there grows in him the sense of the general shape and arrangement of the country. It is no longer a tangled chaos of heights and depths, but an ordered anatomy, formed by the action of definite and continuous forces. So far as his knowledge extends this orderliness is realised. He has developed a geographical sense. That in its turn poses problems for solution. He notes some corner of his map where a deep-lying valley is intricately fitted in amongst ridges which he has seen from without. He becomes desirous to visit it, so that he may complete the map in his own understanding.

When he goes to a new district he cannot but be eager to obtain a geographical grasp of its form and arrangement. The instinct that desires to see round corners and over walls has now new food to grow on. In a fresh district the geographical problem is always fascinating, but in one that has been explored by no mountaineer before, its fascination is overwhelming, especially if the explorer be a surveyor and cartographer, as I can attest. To see the sketch-map of a previously

LOOKING UP VALLEY TOWARDS
ZERMATT FROM NEAR RANDA

Theodulhorn and Furggengrat in distance.



unsurveyed country grow upon the paper is an intense satisfaction. The aspect of every peak gives rise to a twofold problem. Can it be climbed, and if so by what route? How should it be depicted on the map? These questions are ever present. The solution of them is the thought of every hour, the first point of interest in every view. As it is with the explorer, so to a less extent is it liable to be with every climber; for all climbers are to some extent explorers, even though they are but exploring previously described and mapped territory. It is new to them, at any rate, and that is the important fact. Climbers, when they begin to exhaust a district, move to another in hunger after the unknown.

Hence, as the seasons go by, it happens that the æsthetic interest, which was at first the climber's main delight, begins to fade. If he be a man of scientific interests it is liable to an even quicker evanescence than if he be not, for problems of geological structure, or of botanical distribution, or of glaciology and the like, are a keen source of intellectual enjoyment. At length, perhaps, the day comes when the loss is felt. There is a gorgeous range of snow mountains with every effect of cloud and sunshine that the eye can

desire, displayed about and upon them, yet the climber finds with dismay that his heart is cold. The old glory has vanished from the scene and the old thrill is an unfelt emotion. What is the matter? Have his eyes grown dim? Has he lost the faculty of delight? Is he growing old? Whatever the cause, the effect is painful in the extreme. It is one that many of us have felt, especially towards the close of a long and successful climbing season, or extensive journey of exploration. There is but one remedy—to quit the mountains for a while and attend to the common business of life. When winter months have gone by and summer is again at hand, the old enthusiasm is liable to return. Sooner or later the true mountain-lover will begin to starve for sight of the snows.

When age comes upon him and his limbs grow stiff and his heart enfeebles, the desire to climb may slacken, but the love of mountains will not diminish. Rather will it take on again something of its first freshness. Then it was purely objective; now it becomes objective once more. The desire to obtain and to possess passes away. We know what it is like to be aloft. We foresee the toil with no less, perhaps with even greater clearness of prevision than we foresee the triumph and the

EIGER, MÖNCH, AND JUNGFRAU, FROM
SCHERZLIGEN, NEAR THUN



delight. We have learnt the secret of the hills and entered into the treasures of the snow. Now we can afford to rest below and gaze aloft. If the mystery of our first views can never return, the glow of multitudinous memories replaces it not unworthily. The peaks have become inaccessible once more. They again belong to another world, the world of the past. The ghosts of our dead friends people them, and the ghosts of our dead selves. When the evening glow floods them at close of day it mingles with the mellow glories of the years that are gone. The old passionate hopes and strivings, the old disappointments and regrets, the old rivalries, and the old triumphs, vaguely mingling in a faint regret, beget in the retired mountaineer an attitude of peace and aloofness. He feels again the incommunicable and indescribable delight that thrilled him at the first; but now, though it is less passionate, less stimulating, less overwhelming than of yore, it is mellower and not a whit less beautiful and true.

One precious thing beside memory the retired mountaineer possesses, which he who has never climbed must lack: it is knowledge. The keenest mountain-lover who never climbed does not really know the nature of what he is looking at. Even

Ruskin, the most gifted mountain-lover that never climbed, constantly reveals in his writings failures to understand. The true scale of things was never apparent to his eye. Like all beginners, at first underestimating, he presently came to overestimate the size of cliffs and ridges. Ability to see things truly is a great possession. None but an experienced mountaineer can ever so see mountains. He instinctively recognises the important features and distinguishes them from the unimportant. He is conscious of what is in front and what behind. He does not mistake foreshortened ridges for needle-pointed peaks. A range of mountains is not a wall to him but a deep extending mass. He feels the recesses and the projections. He has a sense of what is round the corner. The deep circuits of the hills are present in his imagination even when unbeheld. He knows their white loneliness. The seen end of a glacier-snout implies to him all the unseen upper course and expanse of its gathering ground. Thus every view to him is instinct with implications of the unseen and the beyond. Such knowledge well replaces the mystery of his youthful ignorance. If time has taken something away, it has amply repaid the theft. It is not his debtor. He may mingle now with the

crowd who never quit the roads, and no external sign shall distinguish him from them, but the actual difference between them is fundamental. For the snows are beyond their ken and belong to the same region as the sky; but they are within his area; they form part of his intellectual estate; they hold his past life upon their crests. Where the lowlander looks and wonders, the mountaineer possesses and remembers, nor wonders less for being able to realise the immensity of the mass of beauteous detail that unites to form a mountain landscape.

To attain such ripe fruition, however, does not come to every man, nor to any without taking thought. The most callous person will feel some thrill from a first view of a snowy range, but it may soon become a commonplace sight, its beauty soon be unperceived. Only by taking thought can this be avoided. Unless we can learn from year to year to see more, and more recondite, beauties in nature, we are yearly losing sensitiveness to nature's beauty. There is no standing still in this matter. We must advance or we must go back. A faculty must be used or it will atrophy. It is not enough to go to the mountains in order to grow in their grace. Sensitiveness to beauty

increases in the man who looks for beauty and greatly desires to find it. Pure nature is always and everywhere beautiful to the eye that knows how to see. The perception of the beauty of a thing is, however, not the same as the mere sight of a thing. Many may behold a view, and of them all only one may see beauty in it. He does so because he brings with him the innate or trained capacity for seeing that kind of beauty. But how is that capacity to be acquired or emphasised by training? This question might be answered in a volume and even then the answer would be incomplete and would not compel assent from all. We can only afford a single phrase here for the reply—"by taking thought." If, when a sight produces on the spectator the thrill that comes from the recognition of beauty, he will concentrate his attention upon it and remember it (as a youth remembers the beautiful face of a girl he has merely passed in the street), and if he will be on the alert to find it again and yet again, he will assuredly obtain by degrees a completer understanding and a more sensitive recognition of that particular kind of beauty. He will find more sides and aspects of it than he at first suspected. It will lead him on to a larger knowledge and a wider

LUCERNE AND LAKE FROM THE DREI LINDEN

Pilatus with storm breaking over mountain and town.



sympathy. His æsthetic capacity will be increased and his powers of delight continuously developed. All this in the case of mountain-beauty will come to him, not merely because he wanders among or upon mountains, but because being there he retains towards them a definite attitude of mind,—an attitude, however, which is not that of the climber, and which mere climbing and exploration do not by themselves encourage. He that looks for structure will find structure; he that studies routes will find routes. To find beauty it is beauty that must be searched for as a prospector searches for gold. More priceless than gold, beauty abundantly rewards those who find her. With that guerdon in mind let the mountaineering reader ask himself, "Hast thou entered into the treasures of the snow?"

CHAPTER II

HOW TO SEE MOUNTAINS

I HAVE borrowed the title of this chapter from that of an excellent book, recently published, called *How to Look at Pictures.* The natural man might suppose that such were questions on which there is nothing to say. The picture is before you, and all you have to do is to open your eyes and let the image of it fall on your retina. What can be more simple? Yet that is not all, because the eye only sees that which it brings with it the power of seeing. How much more one sees in the face of a friend than in that of a stranger! It is similar with all objects. In order to see aright and to see fully, the power of seeing must be acquired. Some learn more easily than others, but all must learn. It is admittedly so with music. The most self-satisfied person cannot refuse to admit that even a short tune is better grasped,

better *heard*, on a second hearing than the first time. What is true of a simple tune is more obviously true of a complicated work. The most accomplished musician does not grasp a Wagner opera at a first hearing. Man is a creature with faculties that need training. He is not born with faculties fully trained by instinct.

To perceive beauty in a scene implies a power of selection. There is beauty in every view if you know how to find it, but the eye has to sift it out. Open your eyes at random. They are saluted by an infinite multitude of details. You can pass from one to another, but you cannot see them all at once. Looking at a tree, you can see a few leaves and twigs surrounded by a green spludge, which experience has taught you is made up of leaves or twigs, but you do not see all the leaves at once; so with blades of grass, flowers in a field, strata edges on a cliff, or crevasses in a glacier. In a broad effect of sunset you cannot be simultaneously conscious of more than a few forms and colours, and, of those you are simultaneously conscious of, one will be more important than the rest—one will give the key-note. Nor can you be equally conscious at one moment of forms and colours, or of colours and light and shade. If a view strikes

you at all, it strikes you by some effect in it which you perceive, even though you may not be able to state in words what that effect is. It is clear, however, that any effect is the result of selection by the eye. The effect upon the eye would be unchanged if a quantity of details were blotted out, so long as none of those details formed part of the effect. Thus if you were attracted by the bright effulgence of a snow slope seen against a clear sky (to take a simple instance), and if your mind were concentrated upon that contrast, you would not notice the sudden obliteration of a crevasse in the slope. That detail would form no part of the effect.

As you gaze at any scene you may be continually and rapidly changing the effects you are observing, and that without altering the direction of the eye. Such, in fact, is what every view-gazer is always doing. He is searching for a satisfying effect of beauty out of the multitude of possible effects that could be found, such possible effects being always practically infinite in number. Ultimately it is probable that some one effect will obtain the mastery within him, an effect that his eye is specially capable of seeing and his mind of comprehending. He passes on his way, and a day

THE JUNGFRAU FROM INTERLAKEN

First ascended 1811.



afterwards recalls yesterday's view. What rises in his memory is not the whole scene with all its details, but the special effect that ultimately impressed him, the result of a kind of survival of the fittest within him of a multitude of competing effects that he saw or almost saw.

Take, for example, a very simple instance, the view of the Jungfrau from Interlaken on a clear day. What most people see is a roughly triangular white mass below a blue sky, and limited on either hand and below by green slopes and foreground. Suppose the looker to be a meteorologist whose special study is the atmosphere and its clouds. Probably the first thing he will notice will be the quality of the blueness of the sky and the tone of the lower atmosphere between him and the white mountain and green hills. He will, in fact, observe the air-tones, and consciously or unconsciously they will be the key-note of his impression. Next comes an East Londoner with a Toynbee Hall party, let us say. What strikes him is the novelty of the white mountain. Its whiteness is his main impression, the blue and the green being perceived as mere contrasts to that, and the forms of mountain and hills being unimportant shapes of the colour limits. The size of the mountain may

be a subsidiary impression, but it will depend still upon the white colour, the wonder being that so large a natural object should be of snow. Anon comes a lover of woods and trees and of the green world. The white mountain for him will merely emphasise and dignify the pine woods and the grassy swards. He will note the draping of the hills by the pine-trees, and the character of the woods. The white peak will have value in the view to him, but only a value subordinate to that of the forest. After him comes a climber, trained, let us say, in the Canadian Rockies, and now for the first time visiting the classic land of climbers. When, on a clear day, the Jungfrau bursts upon his vision, he will give all his eyes to her and her only. He will not observe the greater or lesser blueness of the sky, nor the forms and features of the foreground hills—that is to say, they will not be the first object of his attention, the key-note of the effect he perceives. No! he will notice the form of the snow peak, the modelling of the glacier surface, the striping of the avalanche tracks, the character of the outlining ridges and minor buttresses. He will be subtly conscious of what is snow and what ice, of how and why rocks emerge from the snowy envelope. Where the

ignorant will conceive the peak to be a great mound of snow, the newly-arrived climber will feel it to be a mass of rock draped in snow and ice, and his attention will be caught and held by that drapery, its forms and foldings.

Finally there comes an artist, who knows nothing about mountains or forests and cares nothing, but who loves above all else (let us say) colour. What he will see will be some colour effect, some special harmony of tints in sky and snow and forest, some unifying effect that will make white, blue, and green all qualities of a single glory. If he paint the view, that is the effect he will strive to render, and in so doing he will care little about forms and details, little about modellings of glacier drapery and rocky skeleton. The colour-chord will be his aim, and all the power of his vision and the skill of his hand will be concentrated upon that. Or perhaps the artist will not come alone but in company with another of different character. This one cares less about colour than form. What will strike him will be the graceful architecture of the view, the delicate outlines, the intricate rareness of surface modelling in the snow, the strongly relieved emphasis of the limiting lines of the framing hills.

Whether the sky be blue of a special tone and the foreground embellished with every shade and combination of greens will be immaterial to him for the time. He will feast his eyes upon form, and form will be the real subject of whatever representation of the scene he may endeavour to set down.

Any one can multiply instances for himself and carry further to any extent the analysis of possible simultaneous varieties of effect in a single view. If to that he add the changes of effect that nature makes by variations of the weather, time of day, and season of the year, it will be evident enough how a single scene may be beheld with infinite variety by the eye of man; and the suspicion will arise that all conceptions, all appreciations, may not be equally fine or equally easy to grasp, and that, where one man may see little, another may be able to see an effect of singular beauty.

It is the true and proper function of a landscape painter to find effects in views, but it does not follow that the effects he sees are those seen by any man in the street. "I never saw a sunset look like that," said a man to Turner when looking at one of his pictures. "No!" was the reply,

"but don't you wish you could?" It should be the business of a painter to inspire such envy in those who see his works. If he merely shows us things as we see them for ourselves, he is of little service. At best he does but revive our memories. He should do more. He should stimulate our imaginations to a higher activity, or provide us with something to look for in the future even more than to revive in the past.

To return to our two painters of a previous paragraph: if their drawings of the Jungfrau were shown to the meteorologist, he might be prompt to observe that the atmospheric effect was not rendered, and that the colour of the sky was incorrect. The Toynbee Hall excursionist would find the snow lacking in the radiance that had dazzled him. The forest-lover would declare that he could not identify the character of the trees and that the various greens of the foreground were untrue to nature. Whilst the climber would regard the colourist's Jungfrau as a daub in which all the character of the peak was missed. He would fail to recognise any possible route up its painted image or the signs of the difficulties and dangers of the way. Finally,

each artist might regard the other's picture as a more or less mistaken effort.

Yet if all these gentry were animated by a proper spirit they would recognise that their own view was not the only way of seeing the peak, but that any of the others was equally truthful, perhaps equally worthy, nay, that some other effect than those they respectively felt might be superior. Each might learn from the drawings another kind of effect to look for, and raising his eyes from the paper to the peak might then and there see the pictured effect for himself, and thenceforward be able to discover the like again in other places. It is difficult to estimate how far the effective sight of any man has been thus educated, either by pictured scenes, or by a word in season from some companion who shared with him this or the other splendid view. Each of us starts but poorly equipped; each may discover something for himself and to some extent develop his faculties by his own unaided efforts; but ultimately each, even the most naturally gifted, learns far more from others than he originates. The most efficient teachers of how to look are painters—of how to look at scenery, landscape painters. It is unfortunate that the snowy ranges

FIESCHERHORN AND LOWER GRINDEL-
WALD GLACIER



have not been studied by a larger number of the great landscape artists. Turner handled them in their broader aspects and from relatively low and distant points of view; by so doing he greatly helped to spread and deepen a knowledge of mountain beauty. No inconsiderable number of later artists, mostly, however, admittedly of the second rank, have devoted at least a part of their time to mountain-landscape art, some pursuing it to the higher and inner recesses of the snowy region. Yet it must be admitted that the great mountain pictures are yet to be painted. Stott seemed on the verge of a higher success. Segantini almost touched the goal, and would doubtless have come nearer if he had lived longer. Such men amongst the dead, and many living artists, whose names I do not venture to set down lest by inadvertent omission I were to be unjust, have earned our thankfulness by the lessons they have taught; yet plenty more remains to be accomplished. The hills have not inspired landscape painters with all the fulness of their charm.

It is often forgotten that mountains and even snowy mountains found their way into pictures at a very early date. Even the father of modern

landscape painting, Hubert Van Eyck, introduced admirable renderings of lines of snowy peaks into the backgrounds of some of his pictures, as, for instance, in the "Three Maries at the Sepulchre," belonging to Sir Frederick Cook, where the effect of a distant range is beautifully suggested. Albrecht Dürer again, about a century later, made a series of the carefullest studies of mountain scenes in the neighbourhood of the Brenner road, and thenceforward he was fond of introducing excellently-drawn peaks into the backgrounds of his engravings and woodcuts. He possessed a remarkable knowledge of the essential facts of mountain form, so that even a modern mountaineer can learn from his works some of the elements of "how to see." Well-drawn mountains are of frequent occurrence in sixteenth century woodcuts and drawings by the prolific masters of sixteenth century south German and Venetian schools. The fact is one of many proofs of the vitality of that first modern outburst of mountain enthusiasm which gradually faded as the sixteenth century advanced.

It is the commonplace of seventeenth and eighteenth century writers, who chance to refer to mountain scenery, to describe it as of monstrous,

horrible, or even hideous character. Contemporary artists gave it corresponding expression. We are wrong to assume that their pictures and prints manifest any incapacity to draw, because we do not recognise in them the peaks and landscapes we know. The fact was that those artists gave quite truthful expression to the impression produced upon them by mountain scenery. Most Alpine lovers have seen prints professing to depict such objects as the Grindelwald glaciers and the surrounding heights, and have wondered how any one with the view before him can have so libelled it. But the artist intended no libel. All snowy peaks to him were inaccessible altitudes; in imagination he doubled their steepness. I myself, when a boy, approached the Matterhorn with a belief that it was built of precipices. I had always heard it so spoken of. With the thing itself before me I sat down to draw it, and quite unintentionally and unconsciously exaggerated its steepness and sharpness in a way that now seems difficult to account for. If such was the effect of preconception upon a modern lad who had already climbed several relatively high Alpine mountains, how easy it must have been for a seventeenth-century artist to be misled, who never

thought of climbing at all, and to whose mind the notion of any individual interest attaching to a particular peak was altogether foreign. He merely felt a general awe, or horror, of his surroundings, and in depicting mountain scenery very properly made the rendering of either emotion his chief aim. Pictures painted at that time under those influences are not to be regarded as valueless and ridiculous. They are of great value as enabling us to see with our own eyes what mountain scenery actually looked like to the people of those days, and thus to account for the extraordinary language employed by travellers going *the grand tour* who attempted to describe the scenery through which they passed when crossing the Alps.

I have thus far only spoken of the educative effect of mountain paintings in teaching us how to see mountain scenery, but there are other forms of art equally efficient. As a matter of history, it was the writers, and especially the poets, who induced the intelligent public to change their attitude towards mountains. I do not know who was the initiator of the movement or in what country it was first apparent. Rousseau deserves to be remembered in this connection. Sir Walter

THE CASTLE OF CHILLON

Lake Leman lies by Chillon's walls:
A thousand feet in depth below
Its massy waters meet and flow.

BYRON.



Scott and Byron carried on the work, and were supported by the poets of the Lake School. Goethe and Schiller were widely influential in the same direction. At first it was the vague romanticism of the hills and of the supposed simple life of mountain peasants that attracted sympathetic notice and description. Gradually mountains came to be looked at in greater detail and for their own sake. Finally, in our own day, Ruskin for the first time attempted to analyse mountain beauty, and not only produced in the fourth volume of *Modern Painters* a most suggestive and illuminating work, but by the magic of his language and the charm and aptness of his illustrative drawings attracted to it the attention of all that was best in English society. Whether what followed was directly due to his initiative, I do not know. The next important step was the publication of Mr. Edward Whymper's *Scrambles amongst the Alps,* which rapidly attained popularity of the best kind. It is difficult nowadays to put one's self in the place of mountain lovers who met with that book when it first appeared. To us it is still full of freshness and charm, but to them it was far more significant. They compared its illustrations with those in

Peaks, Passes, and Glaciers, published twelve years before, and they were smitten with admiration. "Look at the poor old chromo-lithographs," wrote Leslie Stephen, "which then professed to represent the mountains, and compare them with Mr. Whymper's admirable woodcuts. The difference is really remarkable. Though some of these old illustrations, copied from photographs, suggest the general outlines with tolerable fidelity, most of them utterly fail to represent a mountain at all to an educated eye. . . . The old daubs are mere random indications of certain obtrusive features which could not well be overlooked. Mr. Whymper's woodcuts seem to bring the genuine Alps before us in all their marvellous beauty and variety of architecture." Ruskin and Whymper, in fact, took up mountain-drawing where Dürer had left it three hundred and fifty years before. They looked at the mountains themselves with the humility that belongs to men who love the truth, and they taught others so to look. Alpine climbing taught men for the first time what mountains actually are. The power so to see them was simultaneously developed, and photography has helped.

The question of mountain-photography is a

thorny one, but it must be faced. The reader can scarcely deny that if mountains really looked like the ordinary run of commercial photographs of them, they would be ugly or at least unattractive objects. A volume of such photographs would scarcely lead a man, who had never left his home, eagerly to desire a close acquaintance with snowy peaks. That, however, was actually what Mr. Whymper's woodcuts did. Hundreds of readers of his book were thereby led to become mountaineers. Wherein does this different efficiency consist? A photograph, in theory, repeats every detail of the view it contains. Such details as drop out are either too small or too faint to be visible in the print. A camera does not select. It takes all. In this respect it differs altogether from the human eye. If you look fixedly in a definite direction and regard carefully what it is that you actually see, you will discover it to be a few central details only, and that they are surrounded not merely by vaguely defined objects but by objects duplicated. Thus the sight of the eye and the sight of a camera are not alike, either in what is beheld or what is selected. The sense of beauty depends upon what the eye selects. It would seem then

that the beauty of a view could not possibly be reproduced by photography, and such was the crude conclusion once held by artists of the capacities of this modern process. Photographers, however, have proved that such is not necessarily the case.

In the infinite effects, all of them beautiful, that a single landscape is capable of yielding, and yielding simultaneously, most are beyond the reach of photography; but the same is likewise true of any one art-process. Pen-and-ink drawing, for example, is as incapable of reproducing colour effects as photography. Each art has its own limited area of possible effect. Photography, in so far as it is an art, is subject to its own definite and rather narrow limitations. A photographer can choose his subject and determine its exact limitations. As he can deal only with forms and tones, he must choose a subject so arranged by nature that its forms are in themselves beautiful, and its tones a harmonious distribution of light and shade. But light and shade varies with the hour of the day and season of the year, and forms vary with the drift of clouds over the hills, so that the selection of moment becomes for the photographer as im-

THE CORPUS CHRISTI PROCESSION TO
THE HOFKIRCHE OF ST. LEODEGAR

The Principal Catholic Church of Lucerne.



portant as the choice of point of view, direction, and area of subject. Again, by choice of length of exposure and by methods of development, the photographer can alter the quality of light and shade in his negative and the amount of detail he renders. These three factors are entirely under the photographer's control, and in so far as he avails himself of them, not merely to reproduce a view but to reproduce the picturesque effect in a view, he becomes and deserves to be regarded as an artist.

In our own days, as the photograph exhibitions of the Alpine Club have demonstrated, there are no inconsiderable number of mountain artist-photographers. It has been proved that snow mountains are a specially suitable subject for such art. Views in the high regions of ice and rock seldom depend for their chief beauty upon colour. He whose eye is sensitive to colour-effects can, indeed, find such in profusion in the regions of snow, but they are not the effects to which experience shows mountain lovers are as a rule most sensitive. What most of us love in mountains is primarily their form. Grand forms are profusely supplied by frost-riven rocks and cloven glaciers. In great snow-fields and slopes,

the surface modelling is often of transcendent beauty, and that modelling can be rendered to perfection by photography, if the right moment be chosen. Photographers who have known what to look for and what to reject, have perhaps done more even than any other kind of artists in revealing the mountains. But the right moment comes comparatively seldom and has to be seized. A climber may pass for hours through gorgeous scenery, full of subjects for a painter, yet there may not be offered to him one photographable effect. He may expose plate after plate, and carry away with him the most interesting topographical and geographical records, but among them all there will not be a single picture that will render a picturesque effect and be worthy to rank as a work of art. The artist-photographer is a man who can snatch the right moment for the right effect. He must be able to recognise immediately and instinctively, when it comes before his vision, an effect of beauty that can be reproduced. He must see in the complexity of every view what the camera will make of it, knowing for a certainty what it can be made to reflect and what to exclude. In fact he must possess the same qualities as any other kind of landscape

artist, the eye that recognises an effect suited to his art and the skill to render that effect in his resulting work of art.

Such photographers, as I have said, there are and have been. Their works have opened the eyes of many a climber to effects of beauty in mountains of which they had before been unconscious. Returning to the regions of snow, they have been thus enabled to look for them and to find them. Their own sensibility to beauty has thus been enriched and their power of enjoyment correspondingly increased.

In consequence of the work of poets, writers, painters, photographers, indeed all kinds of artists, and of the stimulus exerted by them upon mountain travellers of all sorts, men have learned in the last half-century to see mountains far better, more truly, and more beautifully than was possible before. We find in them complexities and refinements of beauty the very existence of which was previously unsuspected. We do not merely wonder at their size or shudder at their savagery. We can do that when the mood is on us, but the mood seldom comes. Our forefathers generally looked at them from a distance and thought of them as a whole,

seldom doing more than to identify here and there a single individual from the mass. We, on the contrary, have learnt to know them from nearer at hand. We have made friends with them; we can call them all by their names. We know the aspect of each from many points of view, and their features are as familiar to us as were the features of woodside and stream to the mediæval villager. This intimacy with the mountains has taught us that all the snowy ranges of the world are, as it were, of a single race, and that he who knows one knows something about all.

The Alpine climber, who knows the Alps, can be interested in mere description of mountain ascents elsewhere. Knowing what Alpine peaks look like and how they appear in picture and photograph, he can, by aid of pictures and photographs, attain a tolerably complete idea of the aspect of other mountain ranges. Hence the explorers of such ranges, of the Caucasus, the Himalayas, the peaks of Central Africa, South America, and New Zealand, have been called upon to describe the peaks they have climbed, the valleys and glaciers they have traversed, and the scenery of the regions and ranges they have explored, in a way that would have been un-

intelligible two generations ago. What we now demand of a mountain explorer is not merely to tell us the adventures of his route, but to explain to us wherein the quality of the mountain scenery differs from that which is familiar nearer home. He must be prepared to answer many questions which would not have been asked till recently. Has he been to the Himalayas or the Andes? We want to know whether those great mountains look their size, and, if so, wherein the effect is manifested of a scale greater than the Alps. Is he returning from Sikhim? We shall ask him to tell us what the great peaks there look like when seen from the beautiful forest below. What are the atmospheric effects peculiar to the region? And, with yet more persistence, what is the quality of mountain form which distinguishes the great peaks there, so that, beheld merely through the medium of photographs, they so impress their individuality upon us?

Knowing, as we do, the great variety of mountain scenery that can be found in the Alps, between the Dolomites of Tirol at one end and the crags of Dauphiny at the other, we expect to be told whether, in the case of the long Andes range, corresponding varieties are discoverable, and

what and where they are. Such questions and multitudes more arise within us. It is much if a traveller can answer a few of them. At best he leaves us hungry. It is this hunger that impels us to travel afar ourselves, if fortune permit. Some indeed travel and explore for merely scientific reasons. They desire to add to knowledge and to diminish the area of the unknown. Some perhaps believe that they go merely in search of sport. The normal man is more complex. He has these ends in view to a greater or less extent perhaps; but, if he be a normal mountaineer, deep down within him there assuredly resides a true and hearty attachment to mountains and mountain scenery for the sake of their beauty. He may be too dumb to express it or too shy to admit, but we soon discover that the feeling is there, and that it is a dominant fact in his nature. He may not have analysed it. He may never speak of it, never perhaps even state it to himself, yet when we stand beside him on a mountain height, gazing abroad on the undefiled world of snow spread abroad at our feet, we find that we share with him a common feeling and embrace a common joy. After all, it is the beauty of the snows that

CLOUD-BURST OVER LUCERNE



takes us all back to them, and again back. Were that beauty blotted out, how many of us would be climbers? We are like anglers in this respect. We set an aim before us and pursue it with vigour and seem to be wholly intent upon it, but it is the beautiful, natural surroundings of our sport to which it owes its charm. Only the artist can make the realisation of that beauty his active aim, and activity is a necessity to most of us, so we employ ourselves actively in the world of beauty, and take her for the exceeding great reward of our seemingly needless and unprofitable toil.

NOTE.—As to the historical question referred to at the foot of page 34, see Coolidge's *Swiss Travel*, pp. 24 and 128, and the references there given to A. von Haller's *Die Alpen* of 1732.

CHAPTER III

HOW MOUNTAINS ARE MADE

"OLD as the hills" is not a comparison that would be considered apt if invented to-day, for we now know that, geologically speaking, the greatest mountain ranges are of recent elevation, and that even low hills are seldom of great antiquity. It was not till men became climbers, and so grew to have an intimate acquaintance with mountains in detail, that a recognition of the rapid degradation which all mountains are suffering was clearly obtained. To look at the Matterhorn from below is to behold an apparently everlasting tower, yet its base is strewn with ruins, and its flanks are continuously swept by falling masses of rock.

The realisation of this different point of view, which we must presently discuss in more detail, forms a clear mark of division between the attitude towards mountains, of men in the pre-

scientific age and to-day. Our forefathers naturally regarded the hills as eternal and everlasting. They defined the beginning of things in such phrases as "Before the mountains were brought forth." The tops of peaks, actually their newest feature, were hoary-headed to them. This was indeed partly due to their limited idea of the stretch of time into the past. Six thousand years, which to us seems but a day, was an eternity to them. Of course six thousand years is a brief period in the life of a mountain. Judged by such a standard it may be called eternal, and that was the kind of meaning they attached to the word. Mountains have grown young as our notions of time past have extended. If we could lengthen our time-span, the interval of time (about one-tenth of a second) of which we are simultaneously conscious, if we could extend it to years instead of a fraction of a second, we should actually see the mountains changing. In a sense that is what we have imaginatively accomplished.

Pre-scientific man possessed no such power. Dwellers in mountain countries beheld the peaks apparently ever the same. Each summer, as it stripped away part of the winter accumulation of

snow, revealed the same apparently unaltering features. They knew nothing of the movement of glaciers. They regarded snow-mountains as accumulations piled up continuously from the beginning of the world and destined to go on increasing till the end. I remember reading in the comparatively recent book of travel written by an Anglo-Indian, how he went up some Himalayan valley and came to the glacier at the head of it. He attempted to go no further. He conceived himself to have reached the limit of possible advance. He mounted some way up the hillside and looked along towards the head of the valley; all was ice—an accumulation fallen from the cliffs on either hand for thousands of years and some day destined to fill the trough to the brim—such was his notion of the thing he was looking at.

Changeless, eternal, forbidding, still, silent, and horrible—thus the snowy ranges appeared to the pre-scientific gaze. To us they seem the very reverse. We know them to be ceaselessly changing, of relatively short persistence, the theatre of movements of all kinds both violent and slow—not places of death by any means, but the home of an active, a beneficent, and a formative life—

AT MEIRINGEN

Ridge above the Brünig Pass in distance.



not regions cut off and unrelated to the lowlands and habitable world, but the very parent of such, the laboratory where soil is made, and the head of water collected that distributes it below; the counterbalance of the denuding forces that would level the earth with the ocean; regions beneficent as they are beautiful, and as necessary to the well-being of the habitable world as is the richest and most fertile plain.

He that would know mountains and mountain regions aright must know them as the theatre of change, the domain of action. He must not merely look upon peaks as they are, but must conceive of them as they have been and will be. As this kind of knowledge grows and becomes instinctive within him, it will alter his attitude towards Alpine panoramas and broaden his grasp of the significance of mountain physiognomy.

Let us briefly consider the stages of formation and decay of a single group of mountains, not volcanic. If we go back to the very start, we may imagine their future site occupied by a plain. The slow cooling and consequent shrinking of the world involves the wrinkling of its surface, and the position of the wrinkles is determined by a variety of forces, as yet little understood, with

which we need not concern ourselves. Suffice it to assume that our plain occupies the position of the next coming group of wrinkles. A single range or line of mountains hardly exists in the world outside of the commonplace cartographer's mind. Old-fashioned maps used to represent mountains by a kind of caterpillar meandering about on them, and thus gave currency to the notion that mountains are generally arranged along a single line—a notion, by the by, that (in the minds of politicians negotiating boundary treaties) has been prolific in costly disputes and misunderstandings.[1] Mountains generally exist in rows of more or less parallel ranges intricately jointed together, and they do so because, when the wrinkling that caused them began, it did not begin with a single wrinkle, but with a row of wrinkles, such as a soft tablecloth makes on a smooth table when parts of it are moved toward one another.

Thus the first sign of a mountain range will be a series of undulations upon the surface of the supposed plain. These undulations will be roughly parallel to one another. We call the direction of their parallelism the strike of the

[1] Witness the Argentine and Alaska boundary disputes.

ranges. From the moment the wrinkling movement begins, a set of forces is put in operation tending to level the wrinkles and fill up the hollows or valleys between them. These are the forces of denudation. People often vaguely speak as though mountains were first elevated to their full height and then only began to be pulled down; but of course the process of mountain sculpture is due to the simultaneous operation of the elevating and destructive forces. Every mountain is being pulled down in the very process of its elevation. It grows only because it is elevated faster than the destructive forces avail to level it. For all we yet know, some of the mountain ranges which seem most rapidly disintegrating may, in fact, still be growing. No one has yet divided the mountain ranges of the world into those which have not yet reached and those which have passed their maturity. When that has been done we shall doubtless find some clearly marked difference in aspect between them which now we do not know enough to recognise. The visible difference once discovered, the two groups will raise different kinds of emotion in the man who sees them. He will note the aspect of growth in one set

and of decay in the other, and will be correspondingly affected, as we all now are by the young leaves and buds of spring and the fruits and faded foliage of autumn. Sad folk will love the fading and sanguine folk the growing hills. There will arise a new subject for poets and a new group of similes for preachers and moralists. In this way also science enlarges the material of art.

But we must return to our nascent mountain group, as yet a mere series of parallel wrinklings, higher here, lower there, with lines of depression between them. Rain falling will need to drain away, and in doing so will form pools in hollows, and will run along the furrows till it reaches the open country and can turn away. Thus the first streams of a nascent group of mountains follow and do not flow across the strike. Only the rivulets that actually flow down the slopes will flow in a direction perpendicular to the strike, and will be tributaries to the main lines of drainage that flow along the strike.

The mountains are rising steadily as the millenniums of years pass on. The rain keeps falling on them, and as they grow higher the snows of winter first, and later of all the year, whiten their summits and gradually descend upon

STORM CLOUDS OVER THE LAKE OF THUN

Looking up the Kander Thal. The Niesen on the right.



their slopes as the summits reach higher and higher aloft. If the rain always fell uniformly over the whole area, and if the ranges were of rock, homogeneous like a great lump of plaster, equally strong in every direction—if such were the case, each range would remain approximately symmetrical on both sides, and the crest of it would lie evenly between its two flanking troughs. But that is never the case. The rain-bringing winds are sure to come more frequently from one side of the mountain area than from the other. The wet quarter will be the east or the west or the south-west, as the case may be, and more moisture will be precipitated and consequently more denudation effected by it on one side of the ridges than on the other, with important sculpturing results as we shall presently observe.

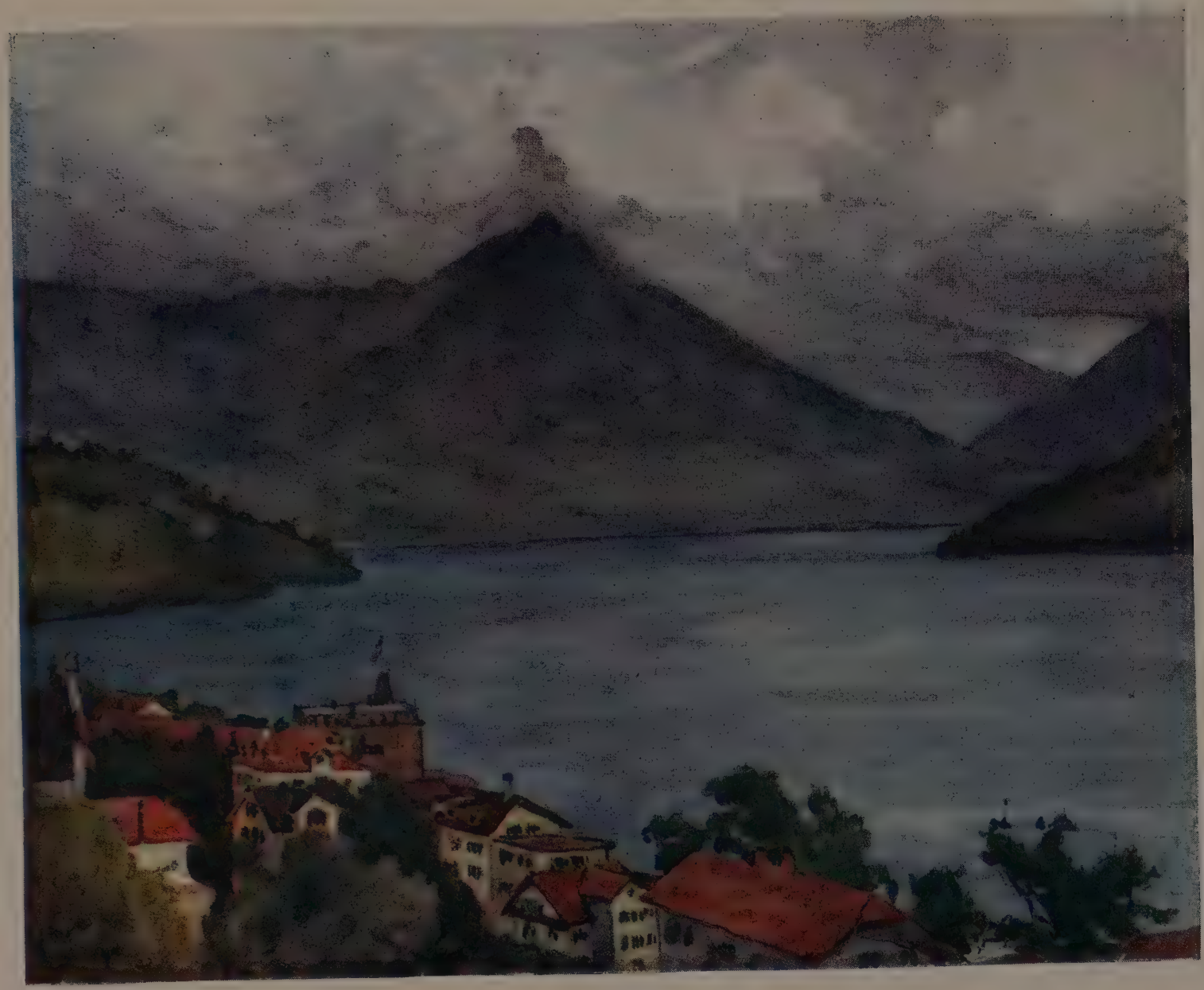
We may best regard the rising mountain area as a plateau with a wrinkled top, such a plateau as Tibet, for example. As time advances the plateau will present ever loftier walls to the outside world, but the undulations within will not greatly develop by any directly wrinkling process. It is not the wrinkling that splits the plateau up into ranges, but quite other forces. All that the wrinkling does is to give to those forces

their first direction. The interior of Tibet shows us what, but for these other forces, a great mountain region would be like. It would be traversed from end to end by low and roughly parallel ridges, separated from one another by shallow valleys raised high aloft on the great plateau-pedestal. In the shallow valleys there would lie many lakes, some having no outlets, others drained by slow streams flowing along the strike of the ranges, and fed by driblets from the slopes of the flanking hills.

But at the ends and around the periphery of the plateau generally a different condition of things will be found. Let us regard the ends first. The slow flowing rivers of the plateau as they reach its extremity will become swift, where they plunge down to the plain. In proportion to their swiftness is the speed with which they cut down their beds into the mass of the plateau-pedestal. If the end of the plateau were a cliff, the rivers would tumble over it in waterfalls, and these would cut their way back and thus dig out cañons in place of the shallow valleys of the original wrinkling. In any case a similar result will be arrived at, and the plateau will be more and more cut down into deep valleys with high

VITZNAU AND LAKE OF LUCERNE

Vitznau is the terminus of the Rigi Railway. The two promontories on the right and left of the picture are the *Nasen*, *Ober Nase* and *Untere Nase*.



ridges between. What were originally small wrinkles above the mean level of the plateau and slight depressions beneath it will be changed by denudation into high mountains and deep valleys, their scale being determined by the amount of general elevation of the plateau above the low-lying country. As the general elevating process goes on, so does the excavation. The deep valleys will be formed first at the edge of the plateau. They will work back into its heart in process of time. The original Tibetan plateau is now greatly reduced, and only the remaining middle part of it preserves any resemblance to its primary surface-form. As you go eastward or westward from that central portion you come into ever deepening valleys and ever relatively higher peaks, measured from the neighbouring valley floor.

Thus far we have only spoken of the natural development of the strike rivers, those original lines of flow that follow the direction of the ranges. We must now observe how their course is affected by the development of the tributary streams that flow down the slopes of the ridges approximately at right angles to the strike. In the case of the Himalayas the rains come from southerly quarters. The damp air-current

drifts against and over the plateau from that direction. Contact with the elevations against which it drifts causes the rains to fall. As the damp current flows further north it becomes continually dryer, so that less and less rain falls. Thus denudation is most energetic on the southern slopes. As the plateau rises its southern edge (to consider that alone for a moment) is most vigorously cut into by the water pouring down that face and forming gullies, which continuously tend to deepen and to cut back into the mass of the plateau. The process has only to go forward long enough, for the most energetic of these side-streams to eat its way back, right through the outermost wrinkle of the plateau, till it taps the first or southernmost of the strike rivers. From that moment the course of the strike river is changed, and instead of flowing away along its original valley, it turns at right angles and flows out through the gully cut by the side-stream, which thus becomes the main river. The next wrinkle is in turn attacked by the side-streams flowing down its south slope and in turn cut through, so that the second strike river becomes thus tributary to the first. And so the process continues.

Such is the history of the formation of a great river like the Indus. It is filled by the robbed waters of countless smaller rivers, one by one drawn within its drainage area by the action of side-streams cutting through intervening ridges. All these rivers and their tributaries go on cutting their way back with ever-increasing vigour as the trunk outlet is lowered by their united volume. This is the process whereby an original plateau is sculptured into a maze of ridges and valleys. The towering heights we behold were never elevated in isolated magnificence. A different thrust did not send up the Matterhorn, the Weisshorn, and Monte Rosa, but all the neighbourhood was elevated by one great heaving. To begin with, some lines of elevation were a little higher than others, and they determined the position of principal peaks and ridges; but as the mass was elevated the hollows were engraved by the *burin* of flowing water. The higher the mass was raised the deeper the hollows were impressed and the wider became their opening, for the self-same forces operate on every slope and continually eat it away and open side-valleys and subsidiary side-valleys into them. These forces operating on both sides of every ridge

rapidly pull down its crest and ultimately round it off and reduce it lower and lower continually, so that it is only a question of time for the biggest mountain mass to be lowered to the level of the plains around it.

Running water is not the only agent that has to be considered. Even more energetic agents act in the higher regions of frost. There the snow that is melted by the sun (whose dissolving power is as operative in the regions so-called of perpetual snow as it is below) percolates into the crevices of the rocks and finds out all their weak places. At night this water freezes, and in freezing expands, thus acting like a wedge and splitting the rock it has penetrated. Next time the sun shines the pieces thus split off may fall. Sooner or later, after repeated operations of the wedge, they must fall, and a new surface of rock will be uncovered to be split and shivered in its turn. The rocks that fall tumble ultimately on to the snow-fields that spread over the high open spaces, where they are taken charge of by the great carrying agents of the heights—the glaciers. The higher a peak is, relatively to its neighbours, the more rapidly will frost attack it, and the more energetic will be the destruction

wrought upon it. I have heard it estimated, or perhaps only guessed, that 1000 tons of rock fall daily from the upper portion of the Matterhorn's rock-pyramid. The great peaks of the Himalaya are falling yet more rapidly to pieces.

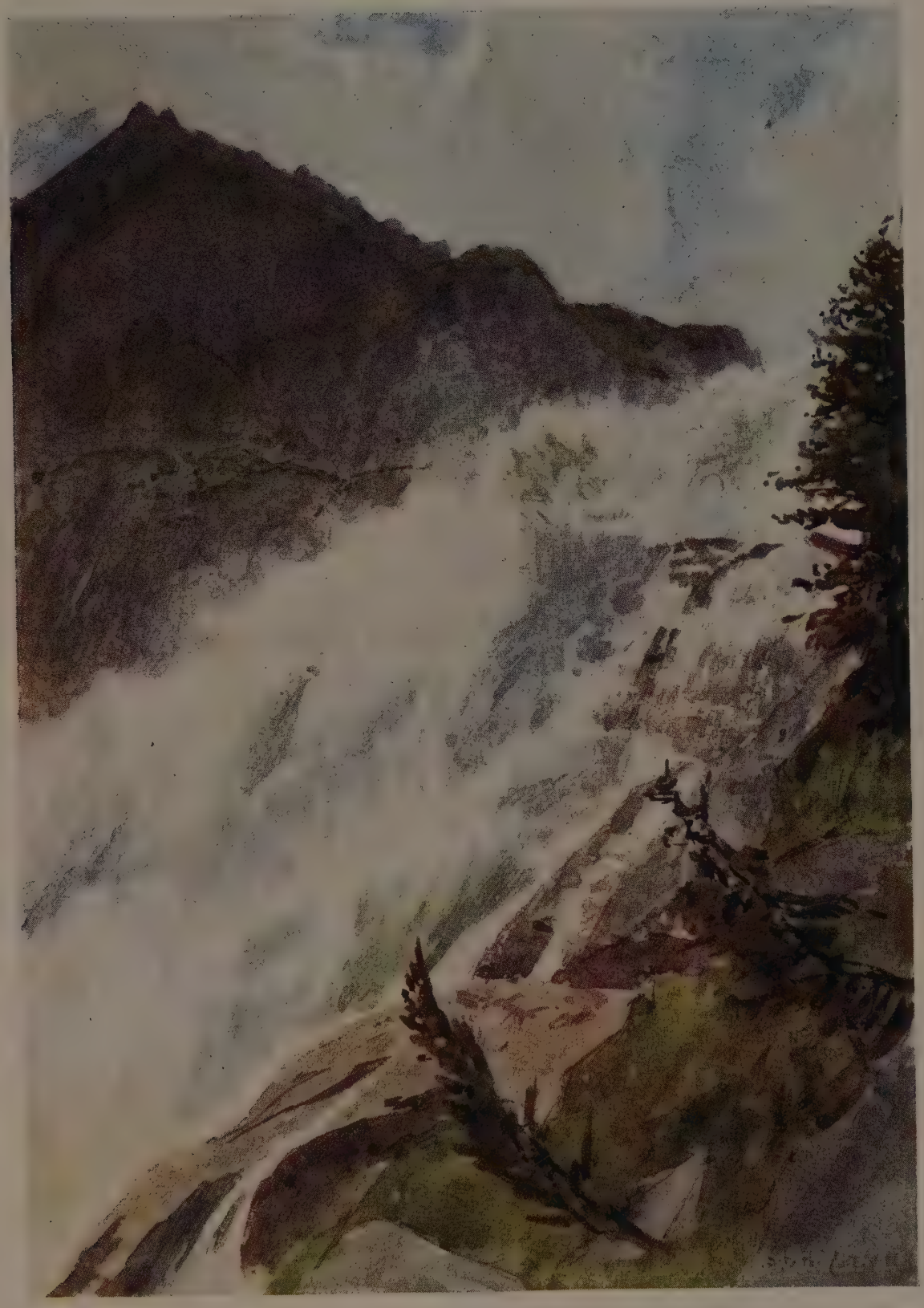
But what in this relation is the action of the glaciers? At one time they were regarded as a great abrading agency. It was thought that the high valleys were fashioned out by them. Later it was concluded that their hollowing action was a negligible quantity. The general belief now is that it is not considerable. Whatever may be the action of glaciers upon their beds, it is at all events a small matter compared with their action as transporting agents. Glaciers are not hoary accumulations of snow, collected in hollow places since the beginning of the world, as our forefathers supposed, but flowing streams of ice, whose rate of movement varies with the slope, the latitude, the mean temperature, and other factors of their situation. The snow that falls at high elevations lies in great masses where it finds lodgment, or falls to such places from the steep rocks which are unable to give it steady support. By these means it falls and drifts together into those great upper reservoirs we call the snow-fields

—resplendent areas of purest white, so toilsome to cross when the sun shines hotly upon them, and so incomparably beautiful to look upon. Here by melting of the surface, percolation into the body of the snow-field, and freezing there, and by the pressure of the ever-increasing accumulation of snow, the substance is gradually changed into granulated ice, and the ice thus formed slowly moves down-hill. The various neighbouring streams of ice flow and unite together, and thus, reaching lower and lower levels and continually melting, they come to a line where the annual increment of snow is equal in amount to the depth of snow annually melted. This is called the snow-line. Still downward flows the mass, and now the amount melted becomes greater than the amount annually received. The thickness of the ice steadily diminishes till at last the total arrival melts and the glacier ends in a so-called snout.

The great importance of glaciers in mountain formation is the part they play as carrying agents. There is practically no limit to the weight of rock they will bear down with them in their steady uninterrupted flow. Whatever falls upon the glacier at any part of its course is carried down by it and ultimately dumped off its sides or end.

THE FALLS OF TOSA, VAL FORMAZZA

Said to be the grandest in the Alps, 470 feet high. The Tosa falls in three cascades. The first only is shown in the picture.



A stone that falls on the highest rim of the snow-field will presently be covered up by newly-fallen snow and will be carried down at, or close to, the floor of the glacier, where it will either be ground to powder or will not emerge till it is melted out at the end of the glacier's snout. A stone that plunges in a crevasse to the bottom of the glacier will have similar experiences. Stones that tumble on to the glacier surface further down will not be so deeply covered by annual accumulations of snow, and will therefore sooner emerge again on to the surface by the melting away of the accumulation above them. Stones that fall on to the glacier below the snow-line will not be covered up at all, but will simply be carried down on the surface.

The visible collections of stone rubbish carried by a glacier are called its moraines. As the surface of a glacier tends to become convex the moraine-stuff tends to be rolled off towards the sides, where it forms the right and left lateral moraines. Where two glaciers flow together and unite, the right lateral moraine of the one and the left of the other will join and be carried down as a medial moraine on the surface of the united glacier. Such medial moraines may be

observed in considerable numbers flowing down, side by side, on glaciers formed by the union of a number of higher tributaries. First comers to the Alps, beholding them from a distance, or seeing them in photographs, sometimes have thought they were cart-ruts, thus showing how false a scale of size their unaccustomed vision applies to mountain views.

A given kind of rock subjected to the action of frost and the other disintegrating forces operative at high levels, usually breaks up into debris of a roughly uniform average size. There will, of course, be some large masses and a lot of dust and gravel, but the average lump will be fairly uniform. A climber in a given district comes to know what to expect on a moraine, and he will immediately notice if the average size of the debris is much larger or smaller than usual. Thus, when he sees a debris-slope or a moraine from a distance, he is instinctively conscious that its granulated aspect represents great blocks of rock. That gives him a roughly correct scale for the view. The lowlander, who has never been in contact with a moraine, has no such sense, and can imagine that the brown streak he sees a few miles away is, as it looks to be, a mere line of dust. It was

through the aspect of the moraines and debris-slopes that I first obtained an approach to a direct visual understanding of the vaster scale of the Himalayas than that of the Alps.

A cliff below the snowy regions, if it does not rise out of the sea, is protected at its base by the debris fallen from it. What tumbles from above piles up below, and keeps the foot of the cliff from being eaten away. But a cliff or slope of rock rising out of a glacier or snow-field is deprived of such protection. All the stones that fall from it are carried away by the ice, so that the surface of the whole cliff keeps on peeling off, and that face of the mountain is gradually planed away. Where a great glacier bay reaches into the mountains this action may be very energetic. The whole surrounding cirque is constantly eaten at and continually extends its inner circumference. In some regions this action is more rapid than in others. Where, as in the tropics, the heat is great by day and the frost at high altitudes bitter by night, destruction goes quickly forward, and the mountains are vigorously reduced. Weak points in the rocky structure are soon found out. The range itself will be penetrated. A pass thus formed tends to be continuously lowered. In the

neighbourhood of the greatest altitudes the destruction is of course most vigorous. This is the reason why, in so many places, alike in the Himalayas and the Andes, cross-cutting rivers find their way through a range by a gorge that passes quite near a culminating peak. The great Indus gorge below Nanga Parbat is the most notable instance I can recall.

We have thus, in the briefest possible manner, sketched out how some of the chief sculpturing forces operate to form mountains. I have not attempted to go into detail or to explain the various corrections and modifications that have to be applied to make the simple outline correspond with facts. Some valleys are actual depressions formed by the caving in of the earth along a line of weakness. Every mountain region contains examples of such hollows. Now and again by some complication or intersection of the wrinkling process a small area may be forced up considerably higher than the surrounding elevation and thus the mass provided for an exceptionally high peak. Volcanic peaks also remain to be considered, and have been excluded from the foregoing brief survey.

In the main, however, the statement is correct

that the mountains of a region are produced by the sculpturing into ridges and subsidiary ridges of a great and slowly elevated mass. What begins as a growing plateau, passes through the stage of rocky and snowy ranges, becomes later on an area of undulating country, and if time sufficed would ultimately flatten out once more into a plain. Between the first stage and the last the sculpturing operations of nature pass through many phases. In the beginning, when the area has only just begun to rise from the level, those forces operate gently. Slopes are slight and streams flow easily down them. When the mountains have been roughly blocked out and the valleys precipitously deepened, the region enters into the dramatic stage of its history. The peaks are at their highest, the valleys at their deepest relatively to the heights. Cliffs are boldest, needles sharpest, torrents most voluminous and rapid. Now is the time when great mountain-falls most frequently occur. The rocks do not merely crumble away stone by stone, but huge masses are undermined and fall with gigantic crash and violence into the valleys, temporarily damming them across and forming lakes, which presently burst, and pour an incredible volume of water in destructive

flood down the narrow and winding valley below. The flood transports and grinds up great quantities of rock and carries the material afar, for hundreds of miles perhaps, before the plain is reached and the mud deposited upon it.

In the theatrical stage mud avalanches are likewise common. To produce them there must be a great supply of loose debris on steep rocks at a high level and much rapidly melting snow about them, whose water drains into gullies and unites in larger gullies, all with banks of rotten and crumbling rock. On a suitable day in early summer, when the sky is clear and the sun hot, the stones will fall in such numbers that they will plug some gully and dam back the water. It will collect and burst the dam, and a flow of stones, dust, and water will begin. At other neighbouring spots the same thing will happen, and the elements of the avalanche will flow together, block a larger gully, and presently burst that block also. So it will go on till a great mass of mud, water, and rocks collects somewhere and finally bursts loose in an avalanche which sweeps all before it.

Such an avalanche I saw from close at hand on 8th July 1892, in the mountains of Nagar. We

were walking up the right bank of a great glacier river, and were forced at intervals to cross its tributaries which came rushing down the hillside on our left. Approaching the mouth of one of these side gullies we heard a noise like thunder and beheld a vast black wave bulging down it. It passed before we arrived and there was silence for a few minutes. Presently the sounds of another were heard aloft, and it soon heaved into view—a terrific sight. The weight of the mud rolled masses of rock down the gully, turning them over and over like so many pebbles. They restrained the muddy torrent and kept it moving slowly with accumulating volume. Each big rock in the vanguard of the avalanche weighed many tons; some were about 10-foot cubes. The stuff behind them filled the gully some 15 feet deep by 40 wide. The thing travelled perhaps at the rate of seven miles an hour. Sometimes a bigger rock than usual barred the way till the mud, piling up behind it, swept it on. The avalanche ate into the sides of the gully and carried away huge undermined masses that fell into it. We saw three enormous avalanches of this sort pass down the same gully in rapid succession, and, after we had gone by, others followed. All

the neighbouring similar gullies discharged such groups of mud avalanches during that period of the year. They are one of the chief agents used by nature to pull down mountains during this, the dramatic stage of their existence. The roaring torrential river below carries off the mud and receives the boulders in its bed, where they are rolled along and in time ground to powder.

Mud avalanches are rare now in the Alps, and are only caused by some exceptional event, such as the bursting of a glacier lake. Once they were common. Mountain-falls of any great size are also much rarer in the Alps now than they were formerly or than they are in some Himalayan regions. Alps and Andes have passed beyond the culmination of their dramatic stage. The mountains of Hunza, Nagar, and North Kashmir generally, are in the midst of theirs.

A mountaineer who has acquired a knowledge of how mountains are made, who has seen in action the forces I have briefly described, who has climbed among mountains in sunshine and storm, in heat and frost, who has spent nights on their cold crests, who knows how and where avalanches of snow, ice, and rock are likely to fall and has a realising sense of their force, their

frequency, and their mass: a mountaineer who has attained by long experience a knowledge of the ways and action of glaciers, who can as it were feel their weight and momentum, in whose mind, when he looks at them, they are felt to be moving and vigorous agents, who sees the lines of motion upon them, their swing round corners, their energy in mid course, their feebleness at the snout:—such a man can look abroad over a mountain panorama with an understanding, a sense of the significance of what he beholds, which, far from detracting from its aspect of beauty, adds greatly to it.

To him a mountain area is no confused labyrinth of valleys and tangle of ridges, but the orderly and logical expression of a number of forces, and of forces that are still operative. To him what he beholds is not a painting on the wall, finished and done once and for ever, but, as it were, a scene in a play—a scene to which others have led up, and after which others will follow, all linked together and arising one out of another in unavoidable and necessary sequence. He perceives the arrangement of the peaks to be as logical as that of the men in a regiment on parade. Each stands in its own proper place, buttressed, and founded upon a broad and

sufficient base. Its drapery of snow is not a kind of fortuitous whitewashing, splashed on anyhow by the whim of a storm. It is a vital part of the peak to which it adheres, owing all its forms to the modelling of that peak—here lying in deep and almost level snow-fields where broad hollows exist beneath it; there breaking into a mass of towering séracs where it is forced to fall over a step in its bed; there again reuniting in a smoothly surfaced area where the bed is once more relatively smooth; yet again opening a system of crevasses where its substance is torn asunder by unequal rates of flow.

To the instructed eye it is not mysterious why one peak should be a tower of rock and the next a dome of snow. All the forms assumed are the result of a few simple causes. They express the past history of the action of natural forces, not difficult of comprehension. Be assured that the understanding eye is well rewarded for the power of comprehension it has slowly and perhaps laboriously acquired. Such understanding comes not merely by familiarity with mountain regions, and is not to be attained by climbing alone, no matter for how many seasons or with what refinement of gymnastic ability. It comes indeed only to the climber, to the man who makes himself familiar with the fast-

LOOKING OVER LUCERNE FROM THE DREI LINDEN

The Towers of the Musegg in the middle distance.



nesses of the hills by actually going amongst them; but it only comes to him if he avails himself of his opportunities to watch the action of Nature's forces when he comes in contact with them. It is not enough merely to see, it is necessary also to look, to examine, to remember, and to love. He that thus acquaints himself with the high places, will learn to know them as they can be known by no other. They will become to him a home, full of reminiscences, full of shared pleasures, full also of problems yet to be solved, and of hopes yet to be fulfilled. To such a mountain-lover weariness of mountains can never come. His climbing days may be ended, for whatever reason; he may cease to expect or even to desire to mount far aloft; but the mountains themselves, whencesoever seen, will remain to him a joy, permanent, indescribable, and of priceless worth, which he at least will hold to be superior to all other emotions aroused within him by the beauties of Nature.

CHAPTER IV

ALL SORTS AND CONDITIONS OF ALPS

Relatively few Alpine climbers of the present generation know the Alps. They know a district or two, perhaps, though even that amount of knowledge is not so common as might be expected. It were truer to say that the normal present-day climber knows a special kind of climbing and only cares to go where that is to be found. The popular kind of climbing to-day is rock-climbing. The new mountaineer is a specialist rock-climber. Having once fallen in love with rock-climbing, he devotes himself to it, becomes more and more skilful, hunts out harder and harder climbs, and only cares to go where those are to be had. He has discovered that England is not ill-provided with such scrambles, if you know where to look for them; and he knows. He may be found at

FRANÇOIS DEVOUASSOUD



Easter and Whitsuntide in recondite gullies in Wales, the Lakes, Derbyshire, or Scotland. In the summer he is to be looked for among the Chamonix Aiguilles or in the Dolomites, or, if at other centres, then on the more difficult rock routes. Naturally a small area suffices him. It is not mountains he seeks but climbs. A single peak will afford him several, a small group might even occupy him for a lifetime of scrambling holidays.

He does not care for easy ways. He hates snow-pounding. A glacier route does not attract him unless it be difficult. Hence his knowledge even of his own particular district or districts is likely to be incomplete. He is not drawn to travel far afield. A wanderer by nature he cannot be; nor is the wandering instinct likely to be developed in him. He does not care for all sorts and conditions of Alps, but for one sort. Only where that kind is to be found is he attracted to go. All present-day mountaineers, of course, are not of this type; but this is the type that present-day mountaineering tends to develop; and of this type the output is considerable.

The old generation of climbers—the founders of the Alpine Club—men who were active in the

sixties and seventies, were essentially wanderers. The craft of climbing was less an object of pursuit to them than the exploration of the Alps. Probably the reason was that they had the Alps to explore, and theirs was the pleasure of exploration which we have not. The Alps have all been explored before our coming. The old men had not even decent maps of the snowy regions to go by. No one knew what was round most upper corners, or whither passes led, or how you could get by high-level routes from place to place. It was a great delight to solve such problems, and it led climbers to become geographers and to interest themselves in the general structure and topography of the Alps. No such problems now remain to be solved. Admirable maps exist, solving them all. The game of exploration is played out in Central Europe. He that would take a hand in it now must wander further afield.

Yet even now to know the Alps would be a life-work for any one. To know them, like the writer of a Climbers' Guide, is more than a life-work. For the Alps cover a much larger area than most people realise. Ordinary persons think of the Alps and Switzerland as almost identical,

yet less than a third of the Alpine area is in Switzerland. By the Alps I mean the whole mountain area between the Mediterranean and the plains of North Italy, France, and Northern Europe, from where they begin at an arbitrary point of offshoot from the Apennines, called the Colle di Tenda, to where they fade out along a curved line, which may be vaguely described as joining Vienna to Fiume. They lie therefore in the five countries, Italy, France, Switzerland, Bavaria, and Austria.

Very few people indeed have any considerable general knowledge of the whole of this great area, or indeed even any sense of the size of it and the main features of its chief divisions. I spent one summer in the attempt to traverse round along the curved middle line of it from the Col di Tenda at one end to the neighbourhood of Vienna at the other, and after walking approximately a thousand miles, including zigzags, I only reached the termination of the snowy ridges, but by no means that of the forest-covered eastern outliers. That journey, however, taught me how much there is to know, and enables me to realise how little I have actually learnt of the contents and character of the Alps as a whole.

This one fact, however, it demonstrated to me: that the several divisions and subdivisions of the Alps contain varieties of scenery of the utmost diversity. Thus a man who knows only the great ranges of the Central Alps must still regard himself as ignorant of the Alps at large. Not only are there all sorts and conditions of peaks, but there are all sorts and conditions of types of scenery, and between these types there is as much divergence as there is between a Kentish landscape and a view from the Gorner Grat.

In this chapter I by no means propose to describe all the regions and types of scenery that the Alps contain, but only to mention a few of them as specimens of far more numerous other types, which there is no space here to include or of which I am ignorant. A scientific writer would divide these types of scenery according to the geological nature of their upbuilding and substance. For instance, he would broadly contrast the limestone with the slaty-crystalline areas, and show how scenery and structure match. I propose to adopt no such rational method, but to roam at random through the region of old memories, and refer as chance directs to such types of scenery and such local varieties as happen

AT BIGNASCO

Old Bridge over the Maggia. Shrine at end, looking up Val Bavona. Basodino in background.



to suggest themselves in turn for description or brief analysis.

Literally speaking, "alps" are high pastures where cattle go to graze in summer-time. We here use the name with no such meaning, but to designate the mountains in general. The Alps, *par excellence*, to the normal man are the great groups of snowy peaks in the heart of the Alpine area. Let us in the first place confine our attention to them. In popular estimation these groups are the following, the Dauphiny, Mont Blanc, Monte Rosa, Oberland, and Engadine masses. In the second rank come others we will refer to later.

Place au géant! First among all is Mont Blanc and its satellites, pre-eminent in size, pre-eminent also in dignity. For this group is really one buttressed mountain, and all its minor masses are supports to the central dome, like the semi-domes, vaulted porticoes and abutments of Hagia Sophia to the uplifted cupola. He who stands on the summit of the great mountain beholds that this is so. His position there is pre-eminent. No other neighbouring height rivals that which he occupies. The highest are many hundred feet below, and they are all obvious supporters and tributaries of Mont Blanc itself. It is only the

yet smaller and remoter elevations that assert a claim to independence.

This pre-eminence of the central mass is the key-note of Mont Blanc scenery. Moreover the mountain is not merely pre-eminent in altitude, but in volume and simplicity of form. Its upper part is a great white dome, whereas the buttress-peaks are for the most part rocky pinnacles. The contrast between these slender, jagged supports and the reposeful majesty of the Calotte is a most picturesque feature and a very rare one, not repeated, so far as I remember, in any other part of the Alps. It dominates the scenery of the whole district. No doubt within the district there are views of great beauty and considerable comprehension, where Mont Blanc forms no part —such, for example, as the Montenvers view up the Mer de Glace—but the characteristic prospects contain Mont Blanc as their central and most important object. This is specially true of all the views from summits, a quality that distinguishes them from summit-views in other districts. Whatever Aiguille you stand upon, and whatever may have been the character of the scenery passed through on the way up, the moment you arrive upon the top, Mont Blanc assumes the pre-

dominance and all else takes second rank. The ordinary summit-view, the wide world over, is a panorama, in which the uninterrupted roving of the vision round the whole circuit is the chief charm. From a minor summit in the Mont Blanc region, the great mountain shuts out a large fraction of the distant panorama and attracts chief attention to itself. Of the other conspicuous beauties of this district, its glorious ice scenery, its astonishingly precipitous crags and slender needle-peaks, we shall take occasion to speak hereafter. In this place it is only the dominant note of each locality that calls for brief description.

From Mont Blanc we naturally pass to Monte Rosa and the Matterhorn. The fact that the two peaks call for co-ordinate attention, at once marks the dispersion of interest characteristic of the Pennine Alps. Indeed not two but nearly a dozen mountains in that group are of almost equal importance, each having votaries who prefer it to the rest. The Matterhorn, of course, is in its own way pre-eminent, if seen from certain points of view; but, when beheld from other summits around, it does not maintain an appearance of leadership. Monte Rosa from Macugnaga, the Dom and Täschhorn from Saas, the Weisshorn

from north or east, the Dent Blanche from the Triftjoch, are objects as imposing each in its own way as is the Matterhorn from Zermatt or the Riffelalp. That peak, as we shall hereafter take occasion to observe in more detail, surpasses them, and perhaps all the rock mountains in the world, in grace of outline from certain points of view. It likewise rejoices in a rare prestige, due to its tragic history and its geographical position. But to those who know it from all sides, and know its neighbours also, it is not the unique and dominating mountain of its district that it is popularly supposed to be. The Zermatt mountain area is probably best to be differentiated from the other great Alpine groups by the almost uniform magnificence and relative equality of its chief peaks. It resembles some splendid Venetian oligarchy as contrasted with monarchical Mont Blanc. The nobles of the Pennine Court with their satellites present greater variety, a more elaborate organisation, and a more varied historical record. Each seems worthy to be chief when beheld from a selected vantage point. Seen from elsewhere, each subordinates itself to some other. This is the region of large independent glaciers, of deep recesses, of noble passes from place to

place. It is also specially rich in minor points of view about 10,000 feet high, and of good sites for hotels some 3000 feet lower, where each possesses a specially fine outlook of its own, which it shares with no other. The dominant note of the district is grandeur; if it lacks anything, it is charm. This, in fact, is a stalwart group, which must be wandered over and inspected from many sides and along many routes. No "centre" reveals it. It is a place for walkers and climbers in the heyday of their vigour.

Turn we next to the Bernese Oberland, the queen district, if Mont Blanc is the king. The Oberland has always seemed to me to be the most graceful and romantic of the great Alpine masses. The very names of its peaks enshrine the poetry that the peasant-dwellers on their flanks learned from them in days long gone by. The Maiden, the Monk, the Ogre, the peak of Terror, and what not. And then how richly they roll off the tongue—Finsteraarhorn, Lauteraarhorn, Blümlisalp, Strahleck! No other part of Switzerland can rival the Oberland for names—certainly not Zermatt with its Meadow-peak, Red-peak, Broad-peak, Black-peak, White-tooth, and the like feeble designations. Easily first for beauty and prestige

among Oberland mountains is the peerless Jungfrau—but you must only see her from the north. Thence she is beheld, a most effulgent beauty, fair among the fairest mountain visions upon earth. The elegance of her form, displayed and emphasised by the white samite of her drapery, and beheld from the lake at her foot, abides in the memory of all who are privileged to behold her. Only one rival does she possess in the district, and that is not a mountain but a glacier, the Great Aletsch, greatest of all in the Alps, beautiful exceedingly to look down upon, beautiful in its middle course, and fairest of all in the wide expanses of its ample gathering ground. It subordinates to itself all the high surrounding peaks and renders them the mere rim of its cup. To a less degree magnificent, yet far finer than the general run of Alpine glaciers, are the other chief ice-rivers of the Oberland district, which thus becomes *par excellence* the home of long glacier-passes, leading through great varieties of mountain scenery, and connecting centres relatively remote. The longest and finest glacier-traverse in the Alps is that which leads from the Grimsel to the Lötschen valley right through the heart of the range.

LOOKING DOWN THE ALETSCH GLACIER
FROM CONCORDIA HUT

Eggishorn peak dark.



Dauphiny, compared with the Pennines and the Oberland, presents to one sensitive to mountain character more contrasts than similarities. For this is an austere region, which gathers itself up together and stands apart, away from natural through routes and the ordinary courses of the human tide. Its valleys are deep, sombre, and stony; its alpine pastures meagre; its forests few and thin. Its peaks hide themselves behind their own knees. He that would know them must search them out. But they reward the search. It is because of the steepness of their bases that they are so recondite, and that very steepness gives them a dignified character all their own. The Meije is their typical representative, a mountain of strangely complex sky-line and irregular shape, that supports its own private glaciers cut-off upon cliffs, and presents the climber with surprises round every corner. Few are the regular pyramids, fewer still the domed snow caps in the tangled complexity of this region, where Nature has impressed her chisel deeply, and has hewn out the great rock masses with unusual ruggedness.

Very different is the remote Engadine group, remarkable for the high level and broad expanse of the floor of its chief valley, where lake beyond

lake reflects the summer sunshine and carries the white curtain of winter on its level frozen surface. A region, this, of fine forests and large expanses of rich grazing grounds, of picturesque torrents and smiling flower-strewn slopes. Its snowy group is little more than an appendage of minor importance to the general scenic attractions of the district. Two fine mountain cirques, defining the basins of two picturesque glaciers, are its dominant features, and in each cirque one peak shines forth pre-eminent. The scenery of these cirques, however, is not of any special character that calls for mention as distinguishing it from the scenery of the other great Alpine groups. The *note* of the Engadine is not sounded there, but rather in the wide, lake-strewn valley itself, where the snow-crests count mainly as the silvery embellishment of its frame.

Climbers who have spent a season or two in each of these five groups may think that they know the Alps, but they will be greatly mistaken. Most of them, indeed, will admit that they cannot afford to neglect the Dolomites, and will at least intend to spend a season amongst them. From a scrambling point of view, if they are rock-climbers, they will be well rewarded, for Dolomite

ASCONIA—ON LAGO MAGGIORE



rock-climbing is a thing apart. Dolomite scenery is even more truly unique. Less grand than that of the great mountain groups, it has a distinction all its own. There is nothing forbidding about the precipitance of its cliffs and summits. Their relative lightness of tint and the warm suffusion of the sun-pervaded atmosphere that so frequently envelops them, makes their elevated parts seem almost to float in the sky. The visible traces of the horizontal bedding of the rocks that compose them render the effect of even their slenderest pinnacles less aspiring than that of the flaked and tilted slaty-crystalline spires of older and more rugged formations. Some of the sentiment of Italy hangs about the Dolomites. The airs that are drifted over them seem steeped in Italian colour, even as their names re-echo the music of the Italian tongue. The valleys between them soon dip into the level of chestnut and vine ere yet they forsake the mountains. The chalets are pregnant with suggestions of Italy, and the inhabitants possess more of Italian grace than of Swiss ruggedness. It is, however, colour, and especially atmospheric colour, that the mention of the Dolomites first calls to the mind of the votaries of those hills and valleys. Who that has

beheld dawn or sunset on Cristallo or Rosengarten can forget the glorious display of rosy lights and purple shadows? The mountain forms are sometimes fine, oftener picturesque (as Titian knew). They have the rare merit of seeming to group into the happiest of combinations and contrasts as though by exceptional good luck; but the luck is of such frequent recurrence that instead of being an exception it must be counted the rule. In the presence of Mont Blanc or the Matterhorn it is natural to adore. The Dolomites men love.

Such, then, are the six main groups of Alps that the ordinary run of tourists know. They include the most majestic scenery, but are far from including all the finest. There yet remain a bewildering multitude of minor groups and areas, each rich in its own charm. Such are the Maritime Alps, the Cottians around Monte Viso, the Graians led by Grand Paradis and Grivola, the limestone Alps of Savoy, the green hills of north Switzerland and Bavaria, the Lepontine Alps, the hills of the Italian Lakes, the Tödi, the Rhætikon, the Adamello, Ortler, Oetzthal, Stubaithal, and Zillerthal snowy masses, the Hohe Tauern, the Carnic and Julian Alps, and various other mountain groups of Styria, Carinthia, and Carniola. How many

of us know a tithe of all these? It is impossible here to do more than refer briefly to a few of them.

Amongst the fairest of them all, the Maritimes should assuredly be reckoned, little visited though they be except by Italians. Their eastern and northern valleys, which alone are known to me, must be counted lovely, even judged by the high standard of loveliness that the Italian Alpine valleys set. Any one of them, transported to the midst of a Swiss group of mountains, would be the pearl of the district. What more enchanting resort can be imagined than the Baths of Valdieri, planted amidst umbrageous copses and beside laughing waters? Here all the elements of picturesque landscape group themselves together in the most perfect natural harmony. Nowhere in the opening season are the flowers more rich, the hillsides more verdant, the foliage of the trees more varied. Nowhere do woods climb slopes in more graceful procession. Nowhere are the rocks and lofty snow-peaks set in more fascinating frames of unexpected foreground. It is a valley of endless surprises and delights. Moreover, its waters are clear and glancing. They burst from the hillsides, tumble in crystalline brilliance over

clifflets, dance through the meadows, and race along beneath the shadow of beeches and chestnuts. No ogres, we may be sure, lurk in the fastnesses of these hills, but only the most delicate fairies, glittering with dew. And then the views from the peaks—how memorable they are, how unlike those of the Central Alps! For from these summits you behold always the sea, far stretching, and ever apparently calm. It looks indeed like any other sea, but you know that it is the Mediterranean with all Africa beyond it, away there in the sunny south. On the other side, far, far off to the north, is the great Alpine wall, and at your feet the sea-like Lombard plain. Those sweeps of flatness on either hand, how they tell in the midst of a mountain view! They bring into it a sense of repose. There Nature has finished her work of pulling down, and man can rest upon the fertile soil in peace. Sweet indeed is Valdieri, but it is no sweeter than its neighbouring glens. He that loves mountains in less savage mood than the great giants are wont to bear, let him fly to the Maritimes and he will not be disappointed.

Proceeding northward, the Cottians and the Tarentaise and Graians present loftier peaks and

LOCARNO FROM THE BANKS OF THE LAKE

Madonna del Sasso on the slope above.



valleys beautiful, though lacking the richness and luxuriance of the Maritimes. In fact these groups stand between the Pennines and the Maritimes alike in position and in character. From the Pennines the fertile valleys are so far removed as scarcely to enter into the normal scenery of the region. In the Maritimes the chestnut woods are at the very foot of the peaks. They are further away in the Cottians, but not absolutely removed from the Alpine area. You may sleep near a vineyard one night and yet be on the snows next day. The great glory of the Cottians is the fine pyramid of Monte Viso, which so many climbers in the Swiss Alps know from afar off. It stands splendidly alone and commands one of the most superb panoramas in the Alps, wide ranging as Mont Blanc's, but seen as from the top of a tower instead of a slowly curving dome with a large white foreground that hides the depth beneath. From the Viso the sight plunges down and then flies away and yet away over the Lombard plain to peaks so remote as practically to defy identification by unaided skill of recognition.

We cannot linger in the west, for our space is limited and more than half of it is spent. Flying eastward, then, we come next to the

Italian valleys of the Monte Rosa group, to which indeed they belong, though I purposely omitted reference to them when writing of that, for in style of scenery they are widely different and frequented by travellers of another sort. Here are mountain centres indeed—Breuil, Gressoney, Alagna, and so forth—whence great climbs may be made. It is not in these centres, however, that the beauty of the valleys culminates, but further down. There are in fact three zones in each valley: the upper, which is purely Alpine though lacking the grandeur of the northern slope; the middle, where on either hand are found peaks that just reach the snow level and rise from luxuriantly afforested bases; and the lower, which in summer time is too hot and fly-infested to be an agreeable resort. The middle zone is the region of fine scenery, of beautiful low passes, and of superb points of view, whence the whole Pennine range to the north is gloriously beheld.

At the lower limit of this zone stands Varallo, in the Sesia valley, a most beautiful resort for one jaded with the austere scenery of the snow and ice world. Here art and nature together claim the traveller's attention. The remarkable lifelike

PALLANZA—EVENING

South end of Lago Maggiore. Campanile of the Church of St. Leonardo, mountains of Saas in the background.



sculptures of the Sacro Monte and the frescoes of Gaudenzio Ferrari well deserve their wide repute, whilst the walk over the Col della Colma to the lake of Orta is one of the most charming known to me the wide world over. Once I beheld from the crest of the pass a cloudless sunrise on Monte Rosa, when the rosy glow of the snows was not more beautiful than the rich and rare violets and purples of the lower foreground hills.

By this pass we may well enter the Italian Lake districts, whose fame is known to all. He would be a niggard indeed who should refuse to reckon as Alpine this gem of scenery. Many of us regard, and rightly, a drop down into the land of the lakes as a necessary part of a full Alpine holiday, the contrast between their luxuriance and high Alpine asceticism serving best to display the charms of each. It is indeed the distant prospects of the snowy range that give a finishing touch of utter perfection to the scenery of the lakes, the finest view-point of all for comprehension and perfect composition being, perhaps, the terrace of Santa Catarina del Sasso. The climber, however, will not really learn to know the lakes if he remains, as most do, idly on their shores. Here, if anywhere, he should ascend. Down

below, save for the water, the scenery may be matched all round the Italian plain and in many a valley, but up aloft on Monte Mottarone, Monte Nudo, Monte Generoso, and hills of that size, you are in the presence of panoramas nowhere else to be matched. The Rigi, the Niesen, and their fellows offer corresponding but not equal prospects north of the main range; for though lakes and snows and wide stretches of landscape are visible from them, they lack vision of the Lombard plain and the magic opalescence of the Italian atmosphere. The mountaineer who has no experience, or if experienced, no joy in the grass-crowned foot-hills that flank the great ranges is no true mountain-lover. For such persons this book is not written. They have their own kinds of pleasure and reward, pleasures which are not low and rewards well worth the winning, but they are not those that I have sought after or can rightly estimate.

Some of the fair qualities of Italian lake scenery mingle with the bolder forms of the mountains of Ticino, and something of the softness of Maggiore's air tempers the fresh breezes falling from Ticino snows. Here lies the peerless Val Maggia, whose orchard-bearing floor sweeps up between mile

THE MADONNA DEL SASSO, LOCARNO

A Pilgrimage Church, picturesquely situated on a wooded rocky cliff high above the town and Lago Maggiore.



after mile of noble cliffs. Here every village church and almost every cottage seems to have been designed and planted for picturesque effect. It is a valley of many gardens, trimly kept, of much emigrant-won prosperity, a home of the vine and the fig-tree, also of trout-streams and other bright-glancing waters. Comfortably habitable and home-suggesting is it; a place to fall in love with, which every visitor hopes to see again, and every native promises himself that he will return to for the evening of his days. Such as it is, such also are its neighbours. Its upper reaches are more splendid than I can suggest. There is a grace in their many waterfalls, a majesty in their great steps and verdant levels, a relative wealth in their vegetation, and a charm about their villages, that must be seen to be understood. Even the Maritimes can boast no more beautiful valley scenery.

The Bergamasque Alps are, I believe, not dissimilar in character, but I know only the mere outskirts of them. What I have seen does not equal Ticino. These carry us by a natural transition to the Adamello group, which yields a remarkable long traverse over high-planted snows commanding a stupendous depth and com-

prehensiveness of outlook, which culminates in the extraordinary panorama visible from the highest point.

We are thus brought back again to the dominantly snowy groups, whereof a number remain yet uncharacterised. First among these secondary masses the Ortler and its fellows call for mention—a group far better known by our German and Italian colleagues than by ourselves. The chief peaks, though built on a smaller scale, have much of the apparent bulk and grandeur of the greater masses of the Central Alps. Their ice-walls and their glacier scenery in general are of the grand type. Like the great peaks, too, they are withdrawn from southern luxury. When all is said, however, they remain second-rate, nor can I recall any special note of beauty by which this district is distinguished.

The Oetzthal, Stubaithal, and Zillerthal groups, which follow one another to the eastward, are, I think, in better case; though they have lost in charm by the rapid shrinkage of their glaciers since I first knew them almost thirty years ago. The average height of the peaks is small when the large area of glacier they support is considered. Formerly the glaciers were much larger. Several

that I knew have utterly vanished, and the largest are greatly reduced. The snow-fields, however, still retain their wide expanse. In consequence of the smallness of the peaks, a greater number of them exist in a given area than elsewhere in the snowy Alpine regions. This makes the foregrounds in the summit views more complex. As the scale does not obtrude itself, the eye magnifies it, and the result is an imposing effect. A similar effect of complexity struck me in Spitsbergen, where the peaks are very much smaller still, and group themselves so closely together that they seem to form a spiny tangle at once puzzling to the topographer and pleasing to the lover of mountain varieties. Owing to the smallness of scale of the Stubai peaks, for instance, you can climb two or three of them in a single day from a high-planted hut, and thus behold in the afternoon a peak you climbed in the morning. Such wandering about at high levels is a new and agreeable experience to mountaineers accustomed to the long scrambles that the greater ranges afford.

The Hohe Tauern, which splits into the two groups, dominated respectively by the Gross Glockner and Gross Venediger, scarcely calls for

other remark, from a scenic point of view, than what was said about the Ortler. The panoramas from the two chief peaks are unusually fine, a quality which they share with three or four of the main elevations of the three groups just referred to. The glacier scenery of the northern slope of the Venediger and the southern of the Glockner group is the finest in Tirol, whilst the Glockner itself is built on great lines, has the qualities of a true giant, and affords some climbing of a high order. If the reader, however, will consent to descend from these superior considerations to others of a more practical character, his attention may be called to the fact that, in this many-hutted district, facilities are afforded to a climber which he will not often find equalled elsewhere except in one or two minor Tirolese groups. So numerous and large are the huts, and so well provided with all the necessaries for life and reasonable comfort, that it is almost superfluous to carry food, or for a party of moderately experienced climbers to require the services of a guide. There are huts where you can breakfast, lunch, dine, and sleep at convenient intervals. If this tends to destroy the charm of solitude, which is one of the greatest that the

regions of snow usually afford, it enables even the average climber to wander more freely than he can elsewhere, and less burdened with baggage or the often unsympathetic companionship of a guide. The gain more than compensates most men for the loss, and makes this district specially deserving of the guideless amateur's attention.

Of regions further east and south I cannot write, knowing only from personal acquaintance the mountains near the Semmering pass, and the hills between them and Vienna. Here the forest scenery is the great charm. The forest-clad hills and deep hidden lakes of the Salzkammergut, North Tirol, and the Bavarian uplands must at least be mentioned. They belong to what we English may describe as the Scotland of the Alps. No lover of mountains will deny the potent charm of forests, especially in hilly country richly watered. Their sombre gloom matches many a human mood.

Not all scenery is alike grateful to every one, or to any one at all times. It behoves a traveller to know his own mood and to choose a resort that matches it. If he wants solitude, he should not select Zermatt or Chamonix. If he abounds in energy, he should not look to lakes and mild climates for its satisfaction. If he loves variety,

he should not plant himself in the midst of a mainly snow-clad region. One district will suit him best in one year, another in another. That will not delight him equally in maturity which enlists the strongest enthusiasm of his youth. But the variety that is in the Alps at large is infinite. There will always be discoverable the right thing for each who cares to search it out.

The habit of constantly returning to the same spot may almost be regarded as a vice to be avoided.

> "To give space for wandering is it
> That the world was made so wide."

Assuredly the wanderer has most rewards. The more he knows of other regions, the more is the significance increased of the view which he at any moment beholds, and so much the more capable does his eye become of recognising all sorts and varieties of beauty. But this is only true of one who travels with observant eyes and receptive understanding. It is possible to travel far and wide without ever really seeing anything. Such travel is the merest waste of energy. To travel should be to learn; but travelling is only learning when the traveller makes learning his purpose.

Discrimination is the quality that distinguishes intelligence from brutal greed. It differentiates the *gourmet* from the *gourmand.* It divides the mountain-lover from the common peak-hunter. It is the quality that continues growing longest, whose exercise is never wearisome, whose reward is always increasing. To be able to discriminate between the qualities of different Alpine regions and to appreciate all their varied merits is to know the Alps. All that it has been possible to do in the present chapter is to indicate in briefest terms some of the characteristic charms of the principal regions, known incompletely to the present writer, and by him but feebly grasped. He ventures to hope that even this sketch, slight and falteringly drawn as it is, may yet serve to suggest to some readers a whole world of delights, which, if they choose, they may immediately enter into and possess.

By all means visit the famous centres. A true instinct has marked them out and made them widely known as specially calculated to awaken the imagination of the town-dwelling modern world. But do not regard them as the whole Alps; do not start with the assurance that there alone is Alpine beauty to be found in highest

perfection. For you, perhaps, the highest Alpine beauty resides in less well advertised localities. Let each seek out for himself that which he can most keenly enjoy. It will be his possession and not another's. Let him take it to his soul. But let him also remember that there are other capacities, which he does not possess or has not yet developed, and that for them also the mountains great and small possess powers of satisfaction as rich and manifold as any he has himself experienced.

LOCARNO AT SUNSET, AND NORTH END
OF LAGO MAGGIORE



CHAPTER V

THE MOODS OF THE MOUNTAINS

Mountains do not merely vary from district to district, but from time to time. Were it not so, how soon should we tire of any single outlook or the neighbourhood of any one centre! They change from hour to hour with the incidence of sunlight, and from day to day with the passing season of the year. They change also, often from moment to moment, with the inconstancy of the weather. In fact they are never twice absolutely the same. In the heyday of our scrambling enthusiasm, we perhaps regarded this variability of the mountains with less satisfaction than it obtains from us later. We should have chosen an unbroken series of long and cloudless days, with the snow all melted from the rocks, and the summit views all complete in cloudless, transparent visibility. Yet even then we found a

singular joy in snatching an ascent in some brief fine interval between two spells of bad weather. Whereas the details of many a featurelessly fine ascent have passed from our minds, which of us does not remember, and recall with a keen delight, climbs accomplished in the teeth of storms, when Nature seemed to stand forth as an antagonist whom we wrestled fiercely with, and joyously overcame?

We may regard mountain moods from two points of view; as experienced by the climber, and as affecting the aspect of mountain scenery when beheld from a greater or less distance. The circumstances of his sport, though in most cases they restrict the climber to one season of the year, fortunately compel him to be on mountains at almost all hours of the twenty-four. Most sports are functions of daylight; the climber must travel by night as frequently as by day. None better than he, unless it be the astronomer, knows the full secrets of midnight beauty. What climber's memory is not stored with priceless recollections of the night and its myriad voices, its noble diapason. By day the eye is supreme; by night the ear. Then it is, when marching along upland valleys, that one hears the

full chorus of the rushing torrent, now booming close at hand, accompanied by infinite ripplings and splashings of little waves, now fainter and more sibilant but no less musical in the distance. Then, too, it is that the breezes sing most sweetly among the trees; then that the glaciers are most melodious, the moulins most tuneful; then, too, on the highest levels, that the ultimate silences are most impressive. The hum of a falling stone, the rattle of a discharge of rocks, the boom of an avalanche, the crack of an opening crevasse, all these sounds should be heard framed in the silence of night, when the sense of hearing is most alert and the imagination most easily stirred.

Who does not recall the velvety darkness of the sleeping valleys through which he passed near the midnight hour when just setting forth for some long ascent? How that contrasted with and set off the brilliancy of the star-spangled sky, where Orion, the Alpine climber's heavenly guide, shone over some col or darkly perceptible ridge, and bade him expect the coming of the day. Then, as the trees are left behind and the open alp is reached, while night still reigns in her darkest hour, how sweet are the airs, how uplifting

the sense of widening space and enlarging sky, how stimulating the wonder of the vaguely felt glaciers and mountain-presences around!

Oftenest perhaps it is moonlight when the climber starts earliest upon his way; then indeed he beholds glorious scenes and revels in the sight, nor envies his sleeping friends in the valley below. Ah! dearly remembered splendours of full moonshine upon the snow! how gladly we retain the images of you in the very treasury of our hearts! Yet who shall attempt to draw them forth for another, or write down even a faint suggestion of their beauty for those by whom they have never been beheld? Surely at no time are the great snows endowed with more dignity, more of the impressiveness of visible size, more aspect of aloofness, of belonging to another and a nobler world, than when the full moon shines perfectly upon them. And then, too, how the snow-fields glisten over all their wide expanse, yet with a pale effulgence that does not paralyse the eye! What velvet blackness embellishes the shadows! How the rocks are fretted against the snow! How clear are the foregrounds of glacier; how spiritual are the distant peaks; how softly lies the faint light in the deep hollows! Surely Night, the ancient

MOONLIGHT IN THE VAL FORMAZZA
FROM THE TOSA FALLS



Mother, speaks with a voice which all her children understand.

At such hours and amidst such scenes the mere onlooker oftenest shivers and suffers, so that half the beauty escapes him; but the active mountaineer, keenly awake, with the blood alive within him and a day of hopes ahead, misses no sight that he is capable of seeing, yet dreams, who shall say what visions of beauty that flit before his mind and vanish in swift succession. And then—suddenly—he turns his head and there in the east—always unexpected—is the bed of white that heralds the day. The night is dying. Her rich darks and whites grow pallid. Each moment a layer of darkness peels off. The sky turns blue before one knows it; the rocks grow brown; there is blue in the crevasses, and green upon the swards—all low-toned yet distinct. Faint puffs of warm air come, we know not whence, touch our faces, and are gone. The lantern has been extinguished; we stride out more freely; the day awakens within us also.

Now is displayed in all its magnificence the daily drama of the dawn. While the mists yet lie cold and grey in the deep valleys, they glow against the eastern horizon, where all the

spectrum is slowly uprolled, more and more fiery beneath, as it tends to red, and cut off below by the jagged outline of countless peaks, looking tiny, away off there on the margin of the world. Low floating cloudlets turn to molten gold. The horizon flames along all its fretted eastern edge, a narrow band of lambent light, a smokeless crimson fire. The belt of colour grows broader; it swamps and dyes the cloudlets crimson. Long pink streamers of soft light strike up from where the sun is presently to appear. The great moment is at hand. All eyes rove around the view. At last some near high peak salutes the day; its summit glowing like a live coal drawn from a furnace. Another catches the light and yet another. The glory spreads downwards, turning from pink to gold, and from gold to pure daylight, and then—lo! the sun himself upon the horizon! a point of blinding light, soon changing to the full round orb. The day has come, and the long shadows gather in their skirts and prepare to flee away.

Now comes the climber's most perfect hour. He shares the strength and promise of the young day. The fresh crisp air seems to lift him from the earth. The sense of the very possibility of

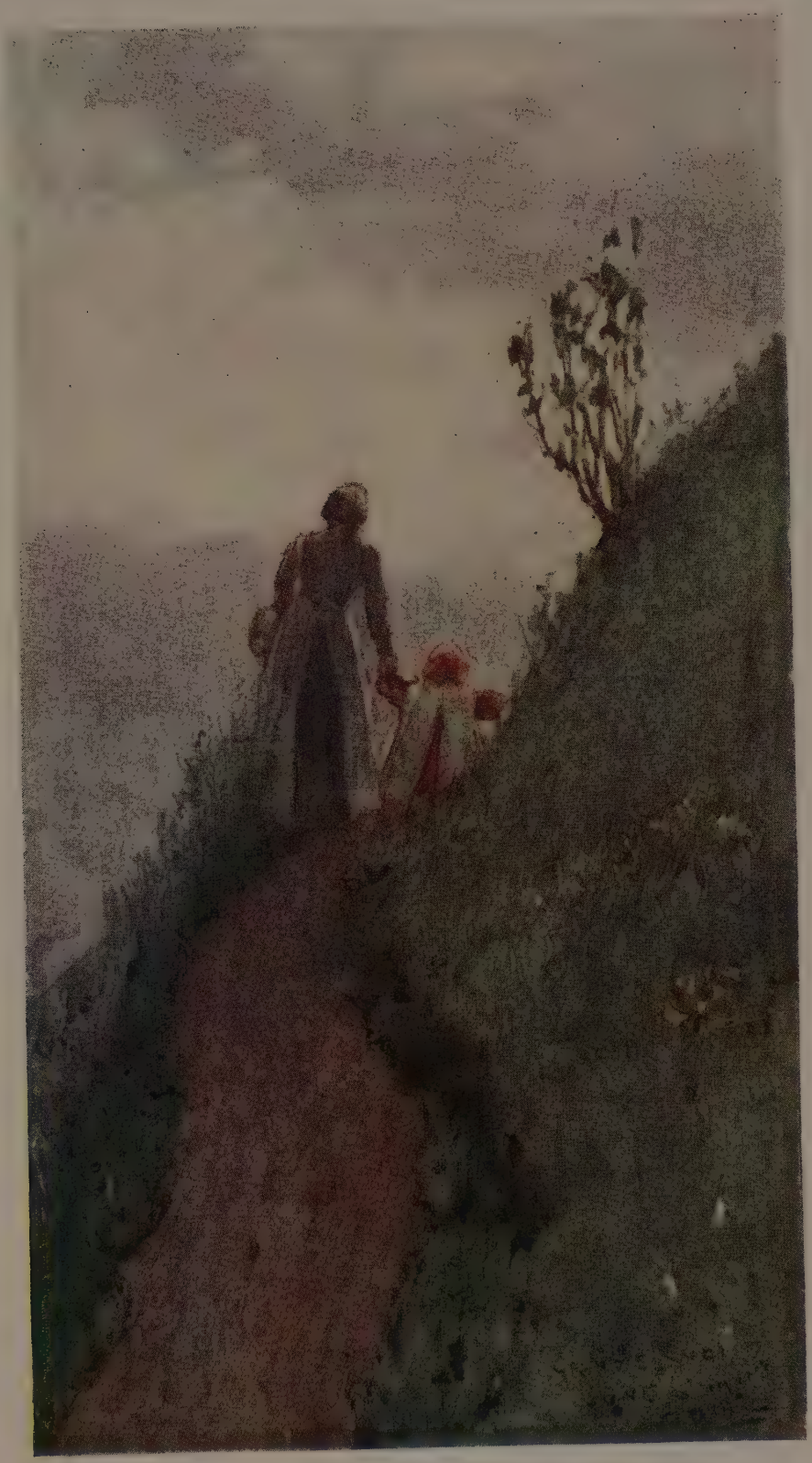
fatigue vanishes. He rejoices in his might. He looks forward with confidence to no matter what difficulties may lie ahead. The snow is hard and crisp beneath his feet. The ice-crystals merrily crepitate as they break up, when the bonds of frost are withdrawn. And now the patch of rocks, or other convenient resting place, where breakfast is to be taken, is soon attained. Packs are cast off. It is an hour of perfect delight. The heart of the upper regions has been reached. The fair world of snow opens on every side. The valleys and habitable places are all forgotten. The scenery is superb. At such a time and place who would exchange with folks below, be they never so prosperous?

It is soon time to be on the way once more. The fulness of the day gradually comes on with all its pains and glories. The sun climbs triumphantly aloft and sheds its burning radiance all around. Foreground details vanish in excess of light, but the distances grow more distinct. What is nearer stands out before what is more remote. The eye ranges afar and feasts upon the widening panorama, which about noon, let us hope, suddenly becomes complete, for we are on the top. No daylight is now too brilliant to

reveal all the multitudinous effect of what is spread abroad to be beheld. The burning snow-fields are below. The mere foreground of our vision is miles away. We look down into sunlit valleys sprinkled with tiny dots of houses and narrow lines of roads. We gaze afar over ridge beyond ridge, it may be to some wide-stretching plain or ultimate crest of remotest ranges. All swims in light, and we triumph in its very exuberance.

Then follows the afternoon of our descent. We plunge into ever-thickening air as we go down. It is penetrated with the dust and flurry of the day. As the hours advance it sheds an ever mellower tone upon the views. Fatigue seems to invade the earth itself as it does our own limbs. We gain the grassy places once more, as the sun begins to lose its towering eminence of place. The rope and all its strenuous suggestions has been discarded, and at length the most toilsome parts of the expedition are over. We can fling ourselves upon the grass by some babbling brook, with the clanging of cattle-bells not far away, and the haunts of men pleasantly adjacent. The peaks we have sought out are not yet very far away. We can still follow the traces of our own footsteps upon

A MOUNTAIN PATH, GRINDELWALD



their flanks. Their spirit is in us. All that we have so recently seen and felt is still present in our minds, as we gaze with newly instructed eyes upon the places we have visited.

The last walk remains, down through the gathering trees, through new-mown hay-fields, past little farms clustering on the hillside—down and ever down into the embrace of the narrowing earth, which holds out arms of recognition to us, her children and the special votaries of her shrines. When at length the mellow evening light is warm upon the hillsides, and the rich shadows are creeping down upon it, we reach the village where we are to rest. There, as we sit before some hospitable inn, and gaze yet once again back to the heights whence we have come, the sunset fires are lit upon them when the shades of night already fill the valleys. For a moment the topmost summits facing west glow with the gold and fade to the rose that ushered in the day and now glorify its close. The colour is withdrawn. The warmth fades out of all the view. Pallor supervenes, and "layer on layer the night comes on."

Such are the normal effects and sequences of a fine Alpine summer day; but days of that sort are rare. Usually what we call "weather" intervenes

to break the normal sequence with surprises that should not be unwelcome. I have thus far referred mainly to the drama of the sunshine; but more varied, more fascinating, more adventurous is the drama of the clouds, those mist mountains that come and go, forming ranges loftier than the hills, whiter than the snows, but endowed with the two-fold gifts of inaccessibility and evanescence. Them we can neither climb nor map. Clouds we have with us everywhere, but it is among mountains that we learn to know them, how they form and fade, mount aloft or drift asunder. The mountain clouds have a plainlier realised individuality than those that pass over cities and plains. Their positions and relative altitudes are more easy to fix, their changes more readily perceived.

It is not my intention here to analyse at length the characters and forms of clouds from the picturesque point of view. That has been most suggestively and eloquently attempted by Ruskin in various chapters of *Modern Painters*, which every mountain-lover should have read. One correction only of that fine description of mountain-clouds will I venture to make, the point being of some importance. "I believe," wrote Ruskin, "the true cumulus is never seen in a great

mountain region, at least never associated with hills. It is always broken up and modified by them. . . . The quiet, thoroughly defined, infinitely divided and modelled pyramid never develops itself. It would be very grand if one ever saw a great mountain peak breaking through the domed shoulders of a true cumulus; but this I have never seen."

Whether it be true that cumulus cloud is never formed in the Alps I cannot say, my own notes not being accessible to me at this moment and my memory at fault; but this I can assert, that, in the heart of the great ranges, Himalayas and Andes, they frequently and magnificently occur. Never shall I forget the piled splendours, the divided and involved intricacies of rounded forms, the stupendous mass of the great towers of white cloud which I have often seen, with their level bases just upon or just above the summits of mountains more than 20,000 feet high, and their sharply outlined crests 15,000 or even 20,000 feet higher. Such clouds are only formed in warm uniformly ascending air currents, undisturbed by variable winds. They never form about peaks, but they form beside or above them. Often in Bolivia have I seen these great towers of mist

rise with majestic deliberation behind the long white crest of the Cordillera Real, till they reduced the snowy peaks to mere pigmies at their feet. Then the afternoon wind would take them and bend them over the range like waves about to break. White island masses would sever themselves one by one and, passing the crest of the watershed, would drift away over the high plateau. If cumulus is formed in the Alpine region, its base would doubtless there also lie above the level of the snows, and the form of the clouds would not be realised by an observer in the mountain region. From Turin or Milan, gazing northward, immense masses of cumulus are often seen, but I have never yet been able to discover whether their bases rest on the snows or whether they merely lie above the foothills and lake-district.

The clouds that belong to mountains, that arise upon their slopes and crests, and are the vestments they wear in the great ceremonies of Nature, these are of another sort. The climber knows them from within and has a very different sense of their meaning from his who merely watches them from afar off. Mr. Whymper in a well-known passage describes how he spent the

THE ALETSCHHORN

Clouds gathering at sunset.



best part of two days on the Matterhorn, wrestling with a violent storm. On his arrival at Zermatt, he learned from the inn-keeper that the weather had been fine but for "that small cloud" on the Matterhorn's flank. Such is the difference between being in some clouds and seeing them from below.

Climbers, as a rule, begin their ascents by night, in weather which they at least hope will prove fine. In doubtful weather nights are relatively cloudless, unless it be in valleys. Not infrequently, indeed, a bed of cloud will lie in a valley when all the upper regions are clear. I well remember once starting from Zermatt for an ascent of one of Monte Rosa's peaks at as black a midnight as can be conceived. Not a star shone in the heavy sky. An hour's walking brought us into a thick fog, but we pushed on and up. It lay quite still. Just before dawn we rose above it and could almost feel our passing out through its clearly defined upper surface. We looked abroad over its level surface as a leaping fish may be imagined to see around it the surface of a lake. All above was absolutely clear. The day that followed was radiantly fine and the mist lake presently faded away. Such views of

mountains rising out of a level sea of cloud are always felt to be wonderful. Sella's photograph of the Caucasus range thus islanded is the best-known example of that kind of view. It is not uncommon in mountain regions. I have described examples of it in Spitsbergen and the Andes which need not be quoted here.

Oftener the climber starts beneath the stars. His first attention is paid to their aspect. If they seem unusually bright and twinkling, he augurs ill of his prospects, but holds on, hoping for the best. Dark sky-islands indicate the presence of clouds here and there. He trusts that the rising sun may clear them away. In due season the dawn breaks, perhaps in unusual and threatening grandeur, the light pouring along "wreathed avenues" of advancing clouds and illuminating with its rich tints the cloud-banners flying from precipitous peaks. Worst of all is it if umbrella clouds seem to float stationary above the tops of rounded snowy summits. Then indeed there is little ground left for hope. These cloud-caps, just lifted off the heads of the mountains to which they belong, consist of vapour in rapid movement and always imply a strong wind. The mist condenses to windward of the summit, blows

over it, and dissolves to leeward, thus making the cloud-cap appear stationary, though every particle composing it is in rapid motion. Similar is the internal composition of a cloud-banner, though the movement of its parts is more easily perceived.

Oftenest, however, at the hour of dawn there is little wind, and the mists condense lazily, forming, fading, forming again in the most whimsical fashion. Or they eddy in hollow places, and reach forth over depressions uncanny arms, which grasp and wither away and return again as though in doubt what to attack. An hour may pass in this weird performance, and then after all the sun may conquer and the misty battalions be swallowed up. But that is unusual. Generally, after some preliminary skirmishing, the moment comes when they gather themselves together, as by word of command, and, coming on in united force, swallow up the mountain world.

This final onrush is often a most magnificent and solemn sight. The gathering squadrons of the sky grow dark and seem to hold the just departed night in their bosoms. Their crests impend. They assume terrific shapes. They acquire an aspect of solidity. They do not so

much seem to blot out as to destroy the mountains. Their motion suggests a great momentum. At first too they act in almost perfect silence. There is little movement in the oppressively warm air, and yet the clouds boil and surge as though violently agitated. They join together, neighbour to neighbour, and every moment they grow more dense and climb higher. To left and right, one sees them, behind also and before. The moments now are precious. We take a last view of our surroundings, note the direction we should follow, and try to fix details in our memories, for sight will soon be impossible. Then the clouds themselves are upon us—a puff of mist first, followed by the dense fog. A crepitating sound arises around us; it is the pattering of hard particles of snow on the ground. Presently the flakes grow bigger and fall more softly, feeling clammy on the face. And now probably the wind rises and the temperature is lowered. Each member of our party is whitened over; icicles form on hair and moustache, and the very aspect of men is changed to match the wild surroundings. Under such circumstances the high regions of snow are more impressive than under any other, but climbers must be well-nourished, in good hard

THE GROSSER ALETSCH-FIRN FROM CONCORDIA HUT

The Lötschenlücke on the extreme left.



condition, and not too fatigued, or they will not appreciate the scene. No one can really know the high Alps who has not been out in a storm at some great elevation. The experience may not be, in fact is not, physically pleasant, but it is morally stimulating in a high degree, and æsthetically grand. Now must a climber call up all his reserves of pluck and determination. He may have literally to fight his way down to a place of shelter. There can be no rest, neither can there be any undue haste. The right way must be found and followed. All that can be seen is close at hand and that small circle must serve for guidance. All must keep moving on with grim persistence, hour after hour. Stimulants are unavailing and food is probably inaccessible. All depends upon reserve stores of health and vigour, and upon moral courage. To give in is treason. Each determines that he for his part will not fail his companions. Mutual reliance must be preserved.

At first the disagreeble details are most keenly felt by contrast, but, when an hour has passed and the conflict is well entered upon, they are forgotten. We become accustomed to our surroundings and can, if we will, observe them with a

deliberate interest. How the winds tear the mists about! There is no constant blast of air, but a series of eddying rushes, which come and pass like the units of an army. Each seems to possess an individuality of its own. Each makes its attack and is gone. One smites you in the face; another in the back. Some seem not devoid of humour; they sport with the traveller in a grim way. Others are filled with rage. Others come on as it were reluctantly.

The aspect of the foreground rapidly changes. Rocks and stones disappear under a thickening blanket of snow. What was a staircase on the way up is found to be a powdery snow-slope in the forced descent. The new snow is soft like a liquid. It flows into the footprints and blots them out. Can it be that there are places somewhere where it is warm and dry—places with roofs over them and snug chimney corners and hot things to eat and drink? How strange the idea already seems! We belong to another world and feel as though we had always belonged to it. Civilised life is like some dream of a bygone night, and this that we are in is the only reality. It, in its turn, we know, will hereafter seem to have been a dream, but now it is the only fact. Here is the world of

ice in the making. This is what snow-fields and glaciers come from. Unpleasant is it? Well perhaps! but it is good to have had such experiences. They develop a man's confidence, employ his powers, and enrich his memory.

After all it is the snow regions in their days of storm that I remember best. One tempest that overwhelmed us on the flanks of Mount Sarmiento in Tierra del Fuego—how clearly even its details arise upon the lantern-screen of recollection! We were looking back northward over the Magellan channels towards the southern extremity of the South American continent, and a storm was pouring down thence upon us. "The darkness in the north was truly appalling. It seemed not merely to cover, but to devour the wintry world. The heavens appeared to be falling in solid masses, so dense were the skirts of snow and hail that the advancing cloud-phalanx trailed beneath it. Black islands, leaden waters, pallid snows, and splintered peaks disappeared in a night of tempest, which enveloped us also almost before we had realised that it was at hand. A sudden wind shrieked and whirled around us; hail was flung against our faces, and all the elements raged and rioted together. All landmarks vanished; the snow

beneath was no longer distinguishable by the eye from the snow-filled air."

Sometimes the wind blows with a fury that is almost irresistible. I have this note of such an experience. "The wind struck us like a solid thing, and we had to lean against it or be overthrown. It lulled for an instant, and we advanced a few yards; then it struck us again, and we gripped the mountain and doubted whether we could hold on. A far milder gale than this would suffice to sweep men from a narrow arête. It was not only strong, but freezing. It dissolved the heat out of us so rapidly that we could almost feel ourselves crystallising like so many Lot's wives. We stood up to it for a minute or two, then rushed back into shelter and took stock of our extremities. My finger-tips had lost all sensation. It was enough."

Such raging tumults of the air are not a very common alpine experience, though most climbers have had to encounter them. Sometimes the air is still, or only gently in motion, while dense clouds envelop peak and glacier. Then a great silence reigns, which yet is not like the silence of night. It seems of a denser, more positive sort. Strange sounds punctuate it in times of heavy snow-fall.

There are slidings from rocks, dull sunderings of snow-drifts grown too heavy to retain their unstable positions. There are crackings in deep beds of snow, newly formed. Small avalanches of snow fall with a cat-like, velvety movement, more of a flowing than a fall. Stones plunge with a dim thud into snow-drifts. All these sounds are heard, but the moving objects, though perhaps quite near at hand, remain invisible. We feel ourselves to be in the midst of unseen presences and activities, and instinctively picture them as hostile.

In the midst of such a silence the first boom of thunder breaking on the ear sounds solemn indeed. It may be a distant discharge, and the next will be nearer. But often the very cloud that envelops us is the thunderer, and the first clap is quite close at hand. If so, it will not so much boom as rattle, re-echoing from the rocks amongst or near which it strikes. It has not come unforeseen. The air has been electrical for some time. We have felt cobwebs upon our faces. Perhaps our ice-axes are hissing, and we may have felt a shock or two from them. With the breaking of the storm comes hail that spatters the rocks and pricks over the snow. The discharges multiply in frequency, and if we are in the heart

of the storm we hear them now on one side, now on the other—rattling like the volley-firing of scattered companies. Seldom, at high altitudes, are the individual discharges very violent, though being near at hand they sound loud enough. The mountain is exchanging electricity with the clouds over all its surface at a number of suitable points. Many climbers have been struck by lightning, but few are known to have been killed, though lightning-stroke may have been the cause of mysterious accidents never accounted for. As a rule there is noise enough to produce a great impression; there is a sense of the power and activity of nature's forces; but there is little absolute danger.

Very different is the sensation of being in the midst of fine weather clouds, such as are often encountered before sunrise, but dissolve and disappear as the power of the sun increases. I well remember a beautiful experience of the kind upon the Rutor. The night had been overcast; when dawn appeared, the mists only seemed to thicken. We reached the summit crest and felt our way over the other side and down. We knew from the map that a great snow-field was sloping away before us in gentle undulations.

"We could not see it, nor indeed could we see anything except a small area of flat ripple-surfaced snow, losing itself in all directions in the delicate sparkling mist, through which the circle of the soaring sun now began to be faintly discerned. With compass and map we determined the direction to be followed, and down we went over admirably firm snow. Seldom have I been in lovelier surroundings than those afforded by the rippled *névé* and the glittering mist. The air was soft. A perfect silence reigned. Nothing in sight had aspect of solidity; we seemed to be in a world of gossamer and fairy webs. Presently there came an indescribable movement and flickering above us, as though our bright chaos were taking form. Vague and changeful shapes trembled into view and disappeared. Low, flowing light-bands striped the white floor. Wisps of mist danced and eddied around. A faint veil was all that remained, and through it we beheld with bewildered delight all the glory of the Mont Blanc range, from end to end and from base to summit, a vision of bridal beauty. Last of all, the veil was withdrawn and utter clearness reigned all around."

Such sudden and unexpected withdrawals of

the cloud curtains, such revelations and surprises are amongst the most transcendently beautiful effects that the mountain-climber is privileged to behold. They amply repay hours of fog, and compensate for days of bad weather. But even if the fog remain, blotting out all distant views, it often provides a setting for near objects, which gives them an emphasis amounting to a revelation. Many of my readers must have beheld great sérac towers of ice looming out of mist, and magnified by it into excess of grandeur. Never is an ice-fall so imposing as when traversed in not too dense a fog. What a sense of poise between heaven and earth is received when one is in a steep couloir which vanishes into mist above and below.

I look back with special pleasure to several days of wandering over a series of snow passes, which had never been traversed before by any member of our party, when we had to feel our way over, through snow-storms and clouds by help only of map and compass. They were easy Tirolese passes, which might have proved monotonous in fine weather, but the prevailing conditions made them intensely interesting and even exciting, for the easiest pass may prove difficult if you miss

THUNDERSTORM BREAKING OVER PALLANZA

Sketch made out of window. Dust of the streets swept before it in clouds.



the actual col. How closely we watched the undulations of the glacier, and how keenly we analysed the formation of the rocks. Every hint of structure was important. None could be neglected. No step could be taken without thought. An ordinary crevassed glacier required careful negotiation. Those occasional rifts in the clouds that made manifest now some isolated point of rock, now some icy wall, now some corniced crest of snow, were a series of framed pictures passed in review. We enjoyed no panoramas, but the mountain detail that was forced upon our close attention was no whit less beautiful.

As for the low-level bad weather views, it is seldom that a traveller can bring himself into a mood to regard them sympathetically. We are not seals, and water is not our element. The oncoming of bad weather, beheld from below, is a grievance to the holiday-maker. He may admit that it is accompanied by impressive appearances, but he cannot pretend to appreciate them. It is not till days of rain have followed one another, and disgust has given place to resignation, that he is driven to face the elements and seek for consolation in activity.

Clouds lie low and rain is pouring from them, but he must sally forth. Before long he loses sense of discomfort and finds himself entering into the spirit of the day. The pouring clouds are a low roof over his head; their margins rest on the pines, defining the tops of some and half-burying others. Every outline is softened, every form vague. Perhaps a glacier snout looms dimly forth, with all the stones upon it glistening with wet. Everything is wet and all local colours are enhanced. The grass glistens in every blade; so do the flowers, and the pebbles on the foot-path. How sweetly everything smells. All has been washed clean. There are no dusty bushes. Water drips and tinkles everywhere. Little springs arise every few yards; runlets fall down every bank. An infinite number of little treble voices unite in the chorus, and can be heard near at hand alone. Further off they are lost in the great "whish" that fills the air. Surely the clouds must be draining themselves dry! But, no! They form as fast as they fall. One sees them gathering at the edge by the trees. Long stretches of mist lie on the hills below the general level, or move slowly along,

"Reach out an arm and creep from pine to pine."

Soon he is up amongst them. There it is not so much rain that falls, it is a general dissolution.

From such a walk one returns a happier creature. Next day, perhaps, the weather will clear. The sun will shine on a glistening world and the clouds will melt away. Then we see the low-lying fresh snow shining on the green alps, and all the great rock-peaks glittering aloft in a new-shed glory. The sky is unwontedly clear and so definitely blue; the trees and grass so green; the snow so white. The early morning moments of such a day are precious indeed. Diamond rain-drops deck grass and pine-needles. There is radiance upon all the earth and freshness in the air. The discomforts of the past are forgotten. We are rested and eager for movement, and the world summons us forth. Nature, after all, knows best, and he is happiest who yields himself, whether in the mountains or elsewhere, to perfect sympathy with her many moods.

CHAPTER VI

MOUNTAINS ALL THE YEAR ROUND

In the chequer-boards of most men's lives, the squares they can allot to the joys of mountain travel are coincident with summer seasons. Thus most of us cannot know the snow mountains all the year round, but only in their warm-weather garb. It may be claimed that then they are at their best, but such claims, in the case of Nature, are untenable. Nature is never or always at her best. One star may differ from another star in glory, but not in beauty; for beauty is in the eye that beholds, rather than in the thing that is beheld. A particular effect in nature may be more attractive than another to a particular man, but that is not really a measure of the beauty of the effect, but of the capacity of the man. None of us can discover all beauty; none of us can always behold beauty in everything; but all of

us together can find beauty everywhere and always in what Nature makes. He that can oftenest discover beauty, and is most continuously conscious of it, is most richly endowed and most to be envied. How often do we hear people say that in their opinion Niagara, or the view from the Gorner Grat, or Mont Blanc, or some other great sight, is disappointing, that it failed to come up to their expectations, that its reputation is ill-deserved, and so forth. Such persons seem to imagine that their opinions are worth something, and that they, or any one, has a say in the matter; whereas the fact is, that the sights of nature may measure men, but that individual men cannot measure them. If a man thinks little of Niagara, that opinion measures him, but not Niagara. All sights of nature are beautiful. All great natural phenomena are greatly beautiful. That is a fundamental fact. Our business is not to question it, but to see the beauty if and when we can.

The great mountains therefore are not beautiful at one time, or more beautiful at one time than another. They are beautiful always, and all the year round. They may be more comfortable to live or scramble amongst at some seasons, but he that can render his sense of beauty independent of

his sense of comfort may be able to grow equally conscious of mountain beauty at all seasons. It is the opportunity that most of us lack, not the power. The fact that the high Alps are beautiful in winter also was not popularly realised till recently. A few men had faith that such would be the case, and they went to see. They brought back lively accounts of the wonders and glories they had beheld, and so incited others to follow in their steps.

The classical first account in English of the high Alps in winter was A. W. Moore's paper in the fourth volume of the *Alpine Journal*, describing a visit to Grindelwald in December 1866, and the passage of the Strahleck and Finsteraarjoch by full mid-winter moonlight. Mid-winter moonlight is doubtless one of the great glories that the summer traveller misses. So bright was it "that the faintest pencil memoranda were legible with ease." The landscape beneath it is not the monochrome picture most of us associate with moonlight. It is rich with subdued colour, most beautiful to see. The full winter moon in the Alps bears to the summer moon, for brightness, the same relation that the equatorial sun does to the sun of our temperate regions. High planted

THE WETTERHORN

Grindelwald Chalets, flower-clad slopes and sunlit trees.



near the zenith, the winter moon floods mountain and valley with a white light that turns snow to silver and hangs a curtain of velvet on every rock-face.

Who that has been to St. Moritz or Davos in winter does not come home with a new conception of what the clearness of the atmosphere can be? The summer air is like poor glass beside the crystal transparency of winter. Perhaps the effect is to bring distances nearer and thus decrease apparent scale—an effect which the whitening of the foundations of the hills tends to increase; but in return, by what delicacy of detail, what crispness of form, what glitter and brilliancy we are repaid. In course of time we learn to read scale truthfully anew.

Another winter glory is the snow drapery of the lower slopes and glaciers below the snow-line. All minor asperities of surface are smoothed away. Flowing lines take the place of broken ones, and large surfaces most delicately modelled predominate. In summer you must climb to the high snow-fields to behold the delicate modelling of which snow is capable on a large scale, but in winter such sights are all around you. To watch the play of sunshine upon them from dawn to

dusk, and the even more fascinating appearance they assume under brilliant moonlight, is joy enough for the hungriest eye.

Then there are the frozen cascades by every roadside, glittering clustered columns of ice fit for fairies' palaces. One beholds them at almost every turn, for the veriest trickle of water, so it be persistent, suffices to build them up. Nor must we forget to catalogue amongst the greater glories of Alpine winter the snow-laden forests. One day the trees will be burdened down by loads of snow. Another, every sprig and pine-needle will be frosted over by the most delicate incrustation of tiny ice-crystals—a natural lacework of surpassing fascination. When the early sun first shines upon such a scene, which night has prepared to be a revelation to the day, so magnificent a vision is provided that even the dullest perceive something of its beauty, and for a moment forget the trifles of their life.

Akin to this glorification of the trees by frost are the glittering "snow-flowers," those charming little groups of crystals that form on the ground in suitable spots under the influence of wind-eddies and other vagaries of the air. They are as pretty as they are short-lived, and possess a quality of rareness that makes them additionally precious.

If in winter we lose the blueness of the lakes and the greenness of the hills, are we not more than repaid? What in its way can be more fair than the absolute flatness and unspotted purity of a frozen lake-surface covered thickly by new-fallen snow? It is no joy to skaters and curlers indeed, but for those who have eyes and have taught themselves how to see with them, little time is left for the distractions of mere games. The snow-shoe is the true winter implement, and especially the Norwegian *ski*, which provides the most glorious exercise and makes accessible the most delightful spots. An occasional run down-hill is the by-reward of the skilful, but his main prize is the sights he is privileged to behold. He can enter the heart of forests or ascend large slopes without the toil of sinking into the soft snow, to whose presence they owe the quality of their winter charm. Ski, moreover, grant access with relative comfort to the higher regions, and enable them to be crossed in suitable places at a time when the crevasses of the glaciers are deeply buried or soundly bridged, and when the snowy world sweeps in larger and simpler surfaces away. Some climbers have found pleasure in attaining in winter the summits of high peaks, whence they

have beheld great panoramas with a distinctness of distant vision that the summer climber seldom attains. They tell us that the white filling of the valleys and covering of the lower slopes tends to flatten the effect of a mountain scene beheld from above. Whatever the special charm of such expeditions, they cannot be made with frequency. Weather-conditions are usually adverse. Short days are a hint to make short expeditions. Thus in winter Nature herself calls attention rather to her own details. She endows with unusual attraction what is near at hand. She sculptures her ornaments on a tiny scale and finishes them with a marvellous elaboration. The wise follow her mood and adapt their eyes to her intentions. The winter months are none too long for them. Indeed they are gone all too soon, and one day, lo! the spring is there and the winter votaries turn and flee.

I have only once spent a portion of the spring in an Alpine region. It is not a comfortable season, but it has its own beauties as great in their kind as those of summer and winter. Now the snow begins to melt, and all the hillsides trickle and run with water. The great silence of winter is past. Nature whispers with a

MÄRJELEN ALP

Winter snow on ground. Foot of Eggishorn on left,
ridges of Strahlhorner on right.



thousand tiny voices, and sings aloud along the valleys and gorges. The hillsides emerge brown from their snowy blanket, but the fresh green soon shoots through and early flowers are swift to put forth. The sense of young life is felt among the mountains as in the plains, for the awakening of the vegetable world is everywhere the same. But the mountains possess spring-time splendours of their own, depending upon the dissolution of the snow. Spring is the great time for avalanches. They fall indeed all the year round, chiefly at high levels, but it is only in the spring that the great avalanches get adrift. Certain great spring avalanches come down with remarkable regularity in particular places, one every year. An avalanche falls at a recognised spot in the neighbourhood of almost every village, which dates from its advent the opening of the spring. Any one who has beheld the descent of one of these giants will not forget the experience, nor will it occur to him to compare such an avalanche with the relatively small ones that tumble among the highest *névé* regions in the summer. These are the veriest snow-balls compared with those vast discharges.

A great spring avalanche is no sudden freak of Nature, but an inevitable occurrence, slowly

engendered. The snow that piles up, flake by flake, during the winter months, on what in summer are the grass slopes below the snow-line, gradually becomes unstable as spring melting advances. The mass loses its cohesion, ceases to bind firmly together, and tends to flow downwards. The conformation of the ground decides how it shall fall. If the slopes upon which it lies are narrow, and lead straight to a suitable resting-ground, or if they are of gentle declivity, it may fall in small masses and early come to rest; for the distance to which it is projected depends upon the momentum of a fall, and the momentum depends upon the volume and the slope. But if the snow lies upon large concave slopes, or upon a cirque, then, when the discharge begins, all the snow within the cirque may flow together, and pouring down the bottom like a fluid, may form a great cataract; then tumbling over cliffs and rushing down hollows and through gorges, it will continue its descent till it reaches a valley bottom, flat enough to hold it. There it will pile up into a great cone or "fan," solidifying as it comes to rest, and strongly bridging over the valley torrent.

An avalanche of this kind does not fall in a few moments, but may occupy hours in its dis-

charge. I saw several of them falling, in the first days of May 1882, in the neighbourhood of the Simplon road. Near Bérisal I crossed one which had recently come to rest, traversing the road. By its rugged white surface, broken into great protuberances, its solidity, and its general form, it resembled a small glacier. To climb on to it one had to cut steps, so steep were the sides. Higher up I crossed several more such fallen masses, through which gangs of workmen were cutting out the road. Towards the top of the pass the snow was tumbling in smaller masses. Over a hundred little avalanches crossed the road within a couple of hours. Then they stopped. On the Italian side similar conditions obtained, but it was not till I reached Isella that the greatest fall took place, or rather was taking place, for it had begun before I arrived, and it continued after I had passed. There, a narrow gorge, with vertical cliff-sides facing one another, debouches on the main valley. It leads upwards to a great cirque in the hills, a cirque that is a grass-covered alpine pasture in the summer. The avalanche was pouring out through this gorge and piling itself up upon the main valley-floor. How the mass of it was being renewed from

behind I could not see. Doubtless all the hill-sides above were shedding their snow, and it was flowing down and crowding into and through the gorge with a continuous flow. As the pressure was relieved below by the outpouring of the avalanche on to the valley floor, more snow came down—snow mixed with slush, and semi-liquid under the great pressure that must have been developed. As the fan was built up, the snow, relieved of strain, hardened into ice-like consistency.

It is easy to describe the process that was going forward, but it is not easy to suggest to the reader the grandeur of effect that was produced. The volume of noise was terrific—a noise more massive and continuous than thunder, and no less deep-toned. A low grey cloud roofed in the view and cast over everything a solemn tone. The avalanche, pouring through the massive gateway of the hills and polishing its sides, came forth with an aspect of weight and resistless force that was extraordinarily impressive. Yet Nature did not seem to be acting violently, though her might was plain to see. She appeared to proceed with deliberation. One looked for an end of the snow-stream to come, but it flowed on and on,

pulsating but not failing. The pressures that must be developed were easily conceived; correspondingly evident became the strength of the hills that could sustain them as if they had been but the stroking of a hand.

Later in the season the traveller often encounters, in deep-lying valleys, the black and shrunken remnants of these mighty avalanches, melted down by summer heats. Little idea can they give him of the splendour of their birth and the white curdled beauty of their surface when they first come to rest. In the nature of things they travel far and fall low, well into the tree-belt, and even down to the chestnut-level on the Italian side. It is a strange sight to see these vast, new-fallen masses lying in their accustomed beds, but surrounded by trees all freshly verdant with the gifts of spring. Yearly each one falls in the same place, falls harmlessly and duly expected. Its coming is welcomed. Its voice is the triumphant shout of the coming season of summer exuberance and fertility. Nature, newly awakened, cries aloud with a great and solemnly joyous cry, and the people dwelling around hear her and arise to their work upon the land. It is not well for a mountain-lover never to have

beheld this characteristic awakening, for it is one of the great events of the mountains' year.

For the rest, spring in the Alps has many of the qualities of spring everywhere else, which need not detain us, for to say that is to say enough. Characteristically Alpine alone are the passing away of the snow and the phenomena that accompany it. After the avalanches have fallen, steady melting does the rest. Each warm day withdraws the winter blanket somewhat and reveals the earth to the sunshine. Convex slopes melt sooner than concave, steep slopes sooner than flats or gentle inclines. Thus the large uniform winter covering breaks up into islands and stripes of white. Gullies are defined against slopes, which previously were lost in them. The detailed anatomy of the hills is manifested more clearly from day to day.

It may be claimed that the effect produced is patchy, and so, judged by spring-time photographs, it appears indeed to be. Never, for photography, are mountains less suitable than in the spring; by some ill-luck the camera seizes upon and magnifies the patchiness of the receding snow. In actual vision the margin of the snow bears a less piebald aspect. Indeed patchiness is not the effect that

the eye receives from it. The edge is at once perceived to be melting. The white garb is being withdrawn. That fact is apparent. If one watches the changes from day to day, they will be found most entertaining from the manifestations of form they yield. Moreover, the daily alteration of the colouring of the ground from which snow has recently melted is most remarkable. The transition is from brown to green. Hence the edge of the snow is margined with brown, and that in turn by green—a kind of iris effect which ascends the hillside as the snow withdraws.

Finally, spring is the time of spilling waters, of torrents brimful and overflowing, of voluminous cascades, of gurgling brooks everywhere—a time, too, when the waters are bright and crystalline, and when the valleys and lower slopes are as vocal with their song as the upper regions are with the deeper diapason of falling snow. If, amongst all these voices, the winds blow shrilly and the storms not infrequently rage, the effects produced, however uncomfortable they may be to the touch of the comfort-loving body, are essentially harmonious in a grand and glorious fashion.

From spring to summer there is no step in Alpine regions. It is merely that as the year advances the level of spring rises. At the edge of the ever-retreating snow it is always spring. Even in August you have but to climb to find it, but it reigns then over a narrow belt and is not a land-encompassing mood. What turns spring into summer for the eye is not easy to indicate. Shall we be far wrong if we say that, in the first instance, it is the flowers? The little venturesome plants of spring, that blossom at the very edge of the withdrawing snow, themselves withdraw when they have smiled upon the world. They are followed by the bright carpet of early summer—the June carpet, which few mountaineers ever behold. It is lovely everywhere—loveliest perhaps in the Maritime Alps, or along the sunny Italian face of the Alpine wall. You must see it before the scythes get to work on the first hay crop, and even before the grass is full grown—a sheet of many colours—not, however, a mere chaos of all kinds of blossoms, but something far more orderly than that. For there is generally some predominant plant at a given spot, luxuriantly blossoming at a particular time, and all the rest

LOWER GLACIER AND GRINDELWALD CHURCH

June 3, 1903, the valley thickly covered with flowers; for four days heavy clouds hung low over peaks and ridges. Only a glimpse such as this to be seen at intervals in the slow swaying fringe of the cloud-curtain.



do but serve to embroider it. Here indeed may be a sheet of one kind of blossom, there of another. It is as though some one had passed by and tossed fair Persian carpets down in different places, carpets of different design, but all in the same general style.

Even at this period greens are predominant, for the flowers are not to be discovered from a distance. And what greens they are—these shrill verdancies of early summer—the despair of artists, the joy of Nature's friends! Later on they will tone down to a more paintable key, but at first they transcend the powers of paint, having in them something almost of the shine of flame. Their coming is sudden. They descend upon the broad bosom of fertile valleys and the wide skirts of gentle slopes, as the daylight descends when the sun grows high. Yesterday all was brown; to-day the greens have come, exultant, exuberant, with the star-flowers spangled amongst them. Then indeed it is good to be alive. The voice has gone out to the valley—"Arise, shine, for thy light has come"—and the valley responds to the call.

With July the full summer is there, and the summer crowd at hand. The longest days are

passing. The freshness is wearing off from the valleys. Now heat, dust, and flies drive men aloft. It is the reception period of the high peaks, when they differentiate themselves plainly from the region below, and alone retain the perfect purity of the winter world. In winter the great mountains stretch themselves visibly down to the valleys. Then Mont Blanc begins at Chamonix, the Matterhorn at Zermatt. But in summer the high peaks seem to be planted aloft on the green world. The Matterhorn is reduced to a pyramid standing on the Schwarzsee Alp. Thus in summer, though the actual peaks themselves look larger, they are more removed out of the way. You must mount afar before you come to their apparent foot. You thus acquire the sense of their belonging to a world of their own. In winter snow glories are at your door. In summer you must labour to behold them, and when beheld they are emphasised by contrast with the fertile world you have left. That is why (apart from all questions of comfort and safety) summer climbing is more impressive than winter. It presents more stages, more variety. In winter-time all is winter; but in summer it is summer in the valleys, spring on the alps, and

winter above the snow-line; only autumn is not there.

Autumn, in fact, is the rarest of the seasons. Its effects are the most evanescent. That is one of its special charms—that, and the tender sadness that pertains to the passing away of things which have flourished and had their day in glory. October in the Alps is a season perhaps more generally delightful in these days than any other period of the year. Then the great summer crowd has gone, and there is room in the caravanserais and on the footpaths. The country-folks have leisure for a word with the wayfarer, and the painful sense of over-pressure is gone. In October the Alps are almost as they used to be in the sixties—a spacious region where a man may find himself alone, or almost alone, in the face of Nature. He cannot now, indeed, heal the scars that the crowd have furrowed upon the face of the earth, nor remove the ugly buildings and defacing embankments that have been raised to dam and form reservoirs or canals for the human flood, but with that exception he can possess the landscape in peace.

October, again, is sometimes a month of much fine weather and of skies marvellously clear. If the

days are short, they are yet long enough for early risers. Evening and morning are brought within the limits of a normal man's possible activity, so that he may enjoy both the splendour of sunrise and sunset without transgressing the daily hours of healthy wakefulness. The October sun does not climb so far aloft as does the royal monarch of the midsummer sky. If the effulgence of day is thus rendered less overpowering, in return the shadows spread wider and retain a richer colouring in their depths. More modelling is visible upon the hillsides and the snow-fields in the bright hours; there are bluer noontide shadows and perhaps even a bluer sky also.

All this is true and characteristic of Alpine autumn, but the most characteristic feature, there as elsewhere, is the fading of vegetation and the flaming colours that accompany it. Not only does the foliage of the trees disclose the change, but the very hillsides blend in harmony with the forests. Berries shine bright on small shrubs and even lurk amongst russet or crimson foliage upon the ground. Plants of all lowly sorts put on a new bright livery, and thus change the character of the foreground. The bright greens vanish; in their place large slopes grow orange and brown.

GRINDELWALD LOOKING TOWARDS
THE WENGEN ALP

Winter snow on the slopes.



But it is beneath, at lower levels, that the changes are greatest and the autumnal effects most striking. Seek for them in the Rhone valley or round the shores of Thun. There you will find the woods absolutely golden or crimson according to their kind—a colouring at once so rich and so brilliant as to seem almost incredible even to him who, having seen it once, and believing that he remembers it, beholds it again and finds it so far surpassing the wealth of his memory and expectation. To behold the snowy peaks rising into the clear autumnal sky, far away beyond a foreground such as this, is a sight well worth an effort. Would not some of our holiday-makers of the better sort find it pleasant sometimes to change the date of their outing, so as not always to herd with their fellows nor every year to behold Nature under a similar illumination?

Just as spring definitely opens with the great avalanches, so winter opens as definitely with the great snow-falls. One day all is clear and bright. The snow-line has retreated to its very highest level. The hard ice of the glacier is revealed far up from the snout. The maximum number of crevasses are open, and the wide-yawning bergschrunds form moats at the foot of all the final

snow slopes that lean against the great faces of the peaks. Next morning all is grey and wet and cold. Clouds cover everything; winds rage; large snow-flakes in countless millions fill the air and drive across the ground. The drifts pile up and up, and all the ground is covered, white to the very depths of the valleys. For two or three days or longer the storm rages, and when at last the sun bursts forth again and the clouds withdraw their curtains, lo! the visible world is deeply buried in the white winter garment that will not be withdrawn till spring once more arrives. As a rule the first great snow-fall of winter comes thus definitely upon the Alpine world. Others that follow may be as great or greater in volume, but they only emphasise existing conditions; they do not, as this one does, change the face of Nature.

Thus the annual drama of the mountain world is played in its four acts, year after year, with infinite variety in detail and great uniformity in the large features. We talk of the seasons as definite divisions, but we must remember that their progress and succession is an affair not merely of day following day but of moment following moment. It is the steady progress, the gradual, imperceptible advance, that the close

observer of natural beauty loves to watch. To-day is not absolutely like yesterday, and will not absolutely resemble to-morrow even though all three prove faultlessly fine. The superficial observer may note no change, but that is because he is superficial. There is always change, and in change the life of things consists.

To know mountains truly, means to recognise the changes which pass over them and happen amongst them. A mountain-lover may be compelled to live in some city of the plains, but, if he could, and in so far as mountains are his chief delight, he would live amongst them, not merely in one season but in all. No man, however, is or can be entirely single-minded. We cannot confine our affections to a single category of natural beauty, nor even to Nature alone. We are folk of many interests. Even the most enthusiastic lover of mountains is something more, and fails from the ideal. Mountains must take their share with other interests in the life of any one who cares for them at all. In so far, however, as they are an interest for any of us, it behoves us to make that interest wide and comprehensive, not restricting it to mountains as mere things to climb, nor to mountains of a particular character

or at a particular time of year, but allowing it to embrace mountain scenery as a whole and at all seasons. Those of us who can do this, will find that the wider and more varied our experience of and sensitiveness to all varieties of mountain scenery becomes, the more intense will it likewise grow to be at any special moment, and the more keenly will any particular effect of beauty affect our hearts. In mountains, as elsewhere, all seasons of the year are marked by beauties that belong specially to them. Each season prepares for that which is to follow, and every day that passes is a transitional step from the one to the other. Let me commend my fellows of the mountain brotherhood to bear this fact in mind when they are wandering amongst the hills. If they attend not merely to the spectacle of the moment, but to the changes that are daily wrought out before their eyes, they will find their pleasures enlarged and their capacity for enjoyment increased. They will obtain a greater consequent understanding not merely of the aspects and moods of the mountains, but of what I may call their settled character as manifested by the larger mutations of aspect which they undergo in passing through the vicissitudes of the seasons of the year.

RIMPFISCHORN AND STRAHLHORN
FROM THE RIFFELBERG



CHAPTER VII

TYPES OF ALPINE PEAKS

In a previous chapter reference has been made to the varied types of scenery which belong to different divisions of the Alpine chain, and the briefest kind of characterisation of those varieties was attempted. But the Alps, and indeed almost all the great snow ranges of the world, possess side by side within a single neighbourhood varieties of peaks sufficiently divergent to be capable of grouping and classification. For example, in the Mont Blanc group, there are domes of snow, needle-points of rock, arêted pyramids, serrated ridges, peaks twinned together, peaks closely grouped in larger number, and other varieties of mountains. In fact, just as whole districts of mountains possess, each one, an individual character due to their geographical position, their local history of uplift and denuda-

tion, the materials of which they are formed, and other such factors, so individual peaks for like reasons possess individual character, and conform more or less evidently to one or another well-marked type. That such is the case will be readily admitted. In common talk, indeed, we are accustomed to attribute fancifully to this mountain masculine ruggedness, to that feminine grace, to another qualities of terror. Some mountains attract to themselves a kind of human affection; others repel; yet others bore, or, on the contrary, interest without charming. In the present chapter, therefore, I intend to discuss the characters of mountains, especially of the great Alpine peaks, from this point of view, considering so far as space permits the characters and dispositions of all sorts and conditions of Alps.

It will be perceived at once that the treatment of our subject will entirely depend on the point of view from which we regard it. Mountains are not beasts and possess no real characters. It is only we who, with our anthropomorphic tendency, endow them with imaginary qualities belonging actually to ourselves and projected forth from us on to the so-called external world. If mountains are primarily thought of as things

to be climbed, we shall characterise them as they react upon the climber. If they are regarded as sights to be beheld, we shall characterise them as they affect our sense of vision. A climber may fancifully figure one mountain as friendly though severe, another as hostile, a third as mean, a fourth as recondite, a fifth as deceitful. Climbers, however, though I hope I may number some of them amongst my readers, are not primarily those for whom this book is written. It is aimed more broadly to interest the mountain-lover of whatever age or sex and whatever agility or endurance. I testify here, not so much of what I know, but of what I have seen and found delightful in the seeing, in hopes to revive recollections of pleasure in others and to suggest the possibility of further joys to the mountain traveller.

Pre-eminent, then, to look at, pre-eminent as a mountain vision, one must, I assert, rank the great domes of snow, such as Mont Blanc. The two greatest Alpine mountains assume that form when beheld from characteristic points of view, sufficiently remote, and, of course, it is the apparent form only that here concerns us. A peak may actually be a blade of rock, snow-whitened, and yet may appear to be a dome, as

the Lyskamm appears from north and south. It must be ranked amongst domes when so beheld. On these giant masses Nature frequently bestows a measurable pre-eminence, for it is not only in the Alps that they attain loftiest altitudes among their neighbours. Elburz which reigns over the Caucasus is a dome, so is Chimborazo, so likewise Nanga Parbat. But even if they were not actually piled higher than their satellites they would look bigger.

A notable instance of the great dignity of effect of a snow dome beheld amongst more rugged and precipitous peaks—peaks, moreover, much loftier than the dome—was forced upon my notice in the Baltoro region of the Mustagh mountains of Kashmir. The Baltoro glacier, most wonderfully situated of all glaciers in the world, is surrounded by the greatest group of high peaks known to exist. A number of them exceed 25,000 feet in altitude, and several are over 27,000 feet. Moreover, most of these great mountains are of bold outline and precipitous structure. There is no deceit about them. They look their height. Some of them are needle-pointed and buttressed by the narrowest rock ridges, set with needle-pointed teeth. It

would be imagined that no mountain forms could be more impressive than theirs, as one after another they come within range of the traveller's vision and grow familiar to him during the long days of his creeping advance along their feet. Impressive indeed they are, splendid beyond words, majestic surpassingly.

It happens, however, that, amongst them all a solitary exception, there stands a single dome of snow, named by me the Golden Throne. I first beheld it somewhat dramatically, when, after climbing to a high elevation by night, the sun rose behind it, and it was revealed in all its width, flanked on either hand by a long line of jagged and aspiring peaks. They were higher than it—most of them considerably higher, yet beyond all question the dome was the most dignified of them all. It owed something of its dignity and distinction, no doubt, to contrast, to the rarity of its form in that region of splintered aiguilles; but that was not alone the cause. The suavity and continuous curvature of its outline, and the grace of it, as well as its greater breadth and apparent relative volume, made the Golden Throne absolutely, as well as by contrast, more dignified than its bolder neighbours. Had it

differed from them only in form it would have prevailed, but it differed more noticeably from them in drapery and colour. Whereas they were of naked rock, it was enveloped in a mantle of purest snow, and the broad white mass (especially later when it shone in the advancing daylight) attained a pre-eminence in brightness and purity for which no ruggedness or precipitancy in the others could compensate.

It is a far cry to the Golden Throne, but Mont Blanc is near at hand, and its aspect is familiar to countless people. None will deny that its reputation is pre-eminent among Alps. I claim that that pre-eminence is not solely due to its culminating position in point of size, but that its broad white mass and shining amplitude go a long way towards accounting for it. It would scarcely occur to any one but a climber to depose Mont Blanc from the first place—Mont Blanc, the "monarch of mountains," diademed with snow. As in human architecture the dome is the most dignified and impressive form, so also it is in nature. In Mont Blanc it attains perfection by the noble breadth of its base and adjustment of its buttresses. Whencesoever beheld, from north or south, from far or near, it always appears poised

THE MATTERHORN, TWILIGHT

"The time may come when the Matterhorn shall have passed away, and nothing save a heap of shapeless fragments will mark the spot where the great mountain stood; for, atom by atom, inch by inch, and yard by yard, it yields to forces which nothing can withstand. That time is far distant; and ages hence, generations unborn will gaze upon its awful precipices, and wonder at its unique form. However exalted may be their ideas, and however exaggerated their expectations, none will come to return disappointed!"—WHYMPER.



aloft in a dignity as impressive as it is reposeful, the white sheen of its spotless snows pure as the bosom of a summer cloud, but unlike that, gifted with an aspect of adamantine permanence.

Next to Mont Blanc in abiding reputation, the Matterhorn takes rank among Alps by universal consent. We may regard it as the best example of pyramidal mountains. Four-square it stands upon its mighty base, fronting the four cardinal points of the compass, each face divided from its neighbour by a clearly-defined ridge or rock arête. As Mont Blanc the dome, so the Matterhorn in turn displays a form adopted by man for some of his grandest architectural efforts, the pyramids of Egypt. If the dome best expresses the idea of soaring aloft, when seen from without, the pyramid best expresses the idea of eternal repose and endurance without end. Geologists may tell us that even the Matterhorn is a passing phenomenon, that the frosts are daily causing it to disintegrate, and that thousands of tons of rock fall at frequent intervals down its sides. Climbers may describe its near aspect as ruinous, and we may know these statements to be true. None the less the mountain beheld as a whole, from even a moderate distance, seems to belie them.

It appears to be from everlasting and to everlasting. It incorporates the ideal of permanence. We conceive it as belonging not to an age but to all time. Were it mathematically four-square, and its faces true planes of even slope, that would be its chief effect, that and the sense of mass and grandeur inseparable from an object of such visibly huge dimensions. But Nature has fashioned it subtly and endowed its faces and ridges with curves most delicate and refined. To its appearance of mass and endurance it adds a grace so exquisite, an uplift so imposing, that these qualities almost take the first place in the impression produced upon the beholder. Seen from the north-east it appears to best advantage. Towards Breuil it shows a more massive front. Its recondite western face, only visible from high snow-fields, displays precipices more appalling and a general aspect of more savage grandeur. But with singular good fortune for the unathletic traveller, it manifests its incomparable grace to perfection towards the easily accessible north-east, and 50,000 people go there annually to worship at its Riffel shrines. They may approach with no more devotional feeling than the average pilgrim manifests at Lourdes, but the fact that they go

is homage to the reality of the emotion which many have actually felt in that glorious presence. The poetic brain has exhausted itself in efforts to find comparisons with living creatures whereby to describe it. Best is Ruskin's choice of a rearing horse. Traces of the neck clothed with thunder, of the mane-fringed crest with cloud streamers for hair, even of the sharp contrasting angle of the folded fore-leg, can be traced in the natural composition; but it is rather the might and spirit of the thing—its combination of wildness, force, and grace—that give aptness to this fetch of similitude.

In writing of the Matterhorn one can make an assumption that would be impossible with any other mountain:—that most readers can recall a vision of its form to their minds. Let me make that demand upon the present reader. Observe then how beautifully the double curve of the left hand or Théodule ridge, first convex, then concave, is terminated and contrasted with the sudden jags of the shoulder, and then taken up and continued again convex to the summit. How the right-hand or Stockje ridge, convex above, drops with a larger sweep and a more astounding ultimate steepness, to be again interrupted by a

lower and more jagged shoulder, and again continued downward by the magnificent white convex curve, which, in its turn drooping into concave, leads the eye away to the broad foundation. No less essential than the outline to the total effect are the two white *névé* basins that lie below the faces and steepen upwards to ice-slopes leading to crags that have all the appearance of cliffs. The importance to the composition of the third or middle shoulder—*the* Shoulder *par excellence* of climbers—should also be insisted on, but space does not here admit a lengthier analysis. The reader will find no difficulty in pursuing the investigation for himself.

The four-sided pyramid, of which we have chosen the Matterhorn for type, is a rarer form than the three-sided, perhaps the commonest class of fully developed peak. Here again there cannot be a moment's hesitation in the choice of a representative mountain, for of such the Weisshorn is beyond question the finest and most famous in the Alps. What mountain-lover has not beheld it, towering gracefully and superbly aloft before him as he descended the upper reaches of the Rhone valley on some bright August day? Westward it opposes a face of rock and is a less gorgeous object

WEISSHORN AND MATTERHORN FROM
FIESCHERALP



to look upon. But its other two faces with their glacial robe are brilliant under all illuminations. What gives it distinction among the multitude of mountains similarly formed is the grace of its slender and long drawn-out ridges. Each of these sharp arêtes, beheld from most points of view, drops very steeply from the spear-tipped summit; then gradually levels off to a shoulder, and so leads the eye down to the massive foundation that supports the whole. Slenderness above, massive strength below—such is the effective contrast that Nature provides.

Another famous peak, the Jungfrau, appears from Interlaken almost as graceful as the Weisshorn; but its beauty is really of another order, and depends far more upon the brilliancy of the curdled surface of the snow, and its division between ice-falls, rocks, and ice-slopes, than upon the outline of the peak itself or the form of its ridges. For pure grace of pyramidal form the Aletschhorn surpasses the Jungfrau, but the better-known peak has advantages of position and of grouping to which we shall presently refer.

Pyramidal peaks lend themselves kindly to embellishment by banners of cloud. Often we behold great sheets of white mist waving away

from their ridges. The sharp definition and marble-like permanence of the mountain forms an admirable offset to the softness and inconstancy of the cloud, which is not merely ever varying the form of its outlines, but is throughout in constant and often swift motion under the dominion of a furious gale. The sense of violent agitation high aloft thus impressed upon the eye, well associates itself with an idea of rugged resistance proper to high peaks and splintered ridges. The slenderer the pyramid and the sharper its arêtes, so much the better does it serve as flagstaff for a flying cloud.

Best of all, however, for this purpose are the rock aiguilles, which never seem quite complete, never fully manifest the astonishing boldness of their structure, except when they are in turn concealed and revealed by mists that form and fade and form again—now cutting them off from all visible connection with the earth and almost seeming to lift them into the heavens, now half-hiding them and half-revealing, now as it were smoking away from their summits like steam from a volcano, now offering a white background to their rugged mass, now overshrouding and empurpling them with shadows stolen from the wardrobe of Night. They lack the dignity of the

broader peaks, these needle rocks, and few of them really deserve (save from a climber's standpoint) to be called peaks at all. Generally they are only buttress pinnacles of greater mountain masses. Yet a tall and well-planted aiguille always possesses marked individuality of its own, which more than compensates for lack of volume and altitude. By its form it attracts the attention of the eye away from large but less wonder-evoking mountains. Thus it makes itself the centre of a view and is remembered when its larger neighbours are forgotten. More than any other kind of peak an aiguille depends for effect upon the character of its foundation and the place where it is planted. The Aiguille du Géant is, perhaps, the most remarkable monolith shaft in the Alps, and has attained no little fame. But its fame is due to the difficulty of scrambling up it. For sheer impressiveness of effect from a distance it cannot enter into serious competition with the Aiguille du Dru. The actual summit-shaft of the Dru is not really remarkable for slenderness. Its sides are not the plumb vertical cliffs that the Géant can show. But the foundations of the Dru carry its lines down, and the supporting masses seem expressly piled together for no other purpose than to lift the slender-seeming

peak as far aloft as possible. The Dru, moreover, though actually an appanage of the Verte, is so situated as to be seen alone and admirably set off by glacier or wooded foregrounds from several easily accessible and convenient positions. Instead of standing aloof like the Géant, it peers down into the valley and takes an interest in human affairs. It is there to signal the sunset with its flaming beacon, and to glow like a brand from the furnace in the presence of the dawn. The departing traveller turns back to it for a last look, and the returning votary of the Alps is impatient to pass the corner beyond which he well knows that it will come into view. It is one of a class, the aiguilles of Chamonix, but it possesses a marked individuality of aspect and it transcends all its neighbours and rivals. They may be harder to climb, but it *looks* as precipitous and inaccessible as any, and, after all, the appearance is the essential element for a lover of the picturesque. There is much more that might be said about aiguilles, their value for contrast with other forms, their essentially subordinate, almost parasitic, character, and so forth, but our space has narrow limits and we must pass on.

We have considered domes and pyramids in special reference to their outline. But they and

AIGUILLE VERTE AND AIGUILLE DU DRU
FROM THE CHAMONIX VALLEY

A well-known group, typical of the Aiguilles of the Mont Blanc chain.



all sorts of other mountains have faces as well as bounding ridges, and these faces sometimes take the form of tremendous walls. We may therefore devote a moment's attention to mountain walls, or rather to what we may briefly describe as wall-faced mountains. These great walls are not necessarily, nor indeed often, truly precipitous, but the important point about them is that they look precipitous. They are not walls, but the eye is deceived into believing that they are. The Alps are rich in noble examples of this type. To name only the most famous: there are the Italian fronts of Mont Blanc and Monte Rosa, the Saas front of the Mischabelhörner, and the north face of the Jungfrau. If you stand in a suitable position, facing rather than enfilading any of these great walls, their slope seems practically vertical. Climbers know that they can all be climbed; their instructed eyes can even trace the routes without difficulty. In so far as that knowledge interferes with the imposing impression which ordinary persons derive from the mere look of the thing, it is a misfortune. Yet even the climber can sometimes forget his *métier*, and lose himself in pure contemplation of Nature's splendour. It is nowhere easier so to do

than in face of these gigantic walls. Pre-eminent amongst them is, of course, the Macugnaga face of Monte Rosa. Not merely does it excel in unbroken width and continuity of plunge, but its striping by buttress and couloir, its impending masses of sérac, its huge piles of avalanche ruins below, and the frequency of the falls that take place, whose fresh traces are obvious even when they are not beheld in actual descent, all serve to increase the observer's sense of the actual steepness of the face. First beheld from near at hand, the vast size of the thing overwhelms the beholder, and yet this first impression is small compared with the ultimate sense of size which slowly grows within him as he gazes and learns the meaning of the details. His attention will soon be called to the fact that the whole face is ruled with lines. They seem fine, almost like the meshes of a spider's web, but a brief consideration proves that they are the tracks of falling masses—some of avalanches, others of falling stones. They are not fine lines at all, but deep grooves, perhaps ten feet wide and as deep as the height of a man. Realise that fact, as the climber does (in so doing he in his turn has the advantage), and you at once magnify, and may even overmagnify, the scale of the view.

BODEN AND GORNER GLACIERS

Monte Rosa from the Schwarzee. The last gleam of the daylight. The foot of the Riffelhorn on the left.



It is a commonplace to proclaim the exhaustless prodigality of Nature's inventions, which every field of grass sufficiently proves, and yet it always seems to me that these great faces specially exemplify it. How easy, one might imagine, to invent detail for a precipice of ice and rock—but take a blank sheet of paper and try; you will find the task almost hopeless. Then turn to any view of Monte Rosa from Macugnaga and observe how it has been done, and how much, indeed how entirely, the effect of the view depends upon the structure and variety of the wall. The classical point whence the face is seen at its best is the Pizzo Bianco. There is a photograph from it in the eleventh volume of the *Alpine Journal.* Note how essential every detail is to the effect of the whole, and how impossible it would be to invent such a consistent multitude of details. The sky-line is of minor importance; it does not hold the eye. What first attracts it is the great sweeping buttresses that emerge through the snow and carry the attention down by their parallelism. As we look more closely at them we find that they in turn break up into minor groups of parallels, and these again into similar elements; yet with all this general repetition no two details

are the same. The aspect of the general structure may be compared to that of a leaf with a number of ribs all obedient to a single law of form. The snow that fills the spaces between the buttresses and overflows them where it can, is no dead covering, but alive like a river. We obtain at first glance, now that we know how to look for it, a sense of its weight and movement. How strange it seems that that movement should not have been observed centuries ago! The flowing of the snow is expressed by all sorts of signs. Here it breaks into cliffs and tumbles; there it pours down in a continuous stream interrupted only by crevasses, which indicate its relative speed at adjacent points; there again, on some small ledge or gentler slope, it lags and piles up. But as a rule it is evidently in haste to get down, and the signs of this haste are a measure of the steepness of the slope. High aloft the plunge seems vertical, and one wonders how any snow can adhere to such uncompromising crags. When the mists are drawn across it, or a bed of clouds lies at its foot, filling the Macugnaga valley as with a white lake, the wall seems yet more cliff-like. It is only when low sunlight strikes it aslant and makes manifest its modelling that a suggestion is given of

the actual angle of the slope leading up from the glacier floor below to the giddy crest.

Another kind of mountain front, akin to these yet belonging to a class of its own, is the true rock-face. Such may have their ledges and gullies picked out with snow, or even (as in the case of the Meije) a small glacier caught on a shelf, but snow must not predominate, must not even cover a considerable fraction of their surface. Mountains with rock-faces of this kind are, of course, commonest among the secondary groups. Thus there are many in Canton Glarus and thereabouts, yet more among the Dolomites and in all the limestone districts. The west face of the Weisshorn may perhaps be counted a rock-wall, but, if that is excluded, the Grivola is, I think, the biggest example. The Blümlisalp and Breithorn, Altels and the Balmhorn, are other examples. If, however, I were to be compelled to select one such peak as type, I should choose Pelmo or Schlern in the Dolomites, and be content, even though some vaster example were quoted against me. For, after all, it is not the actual scale that matters, but the appearance of scale. I have heard it said that the north-east face of the Zinal Rothhorn is the biggest true cliff in the Alps. It may be, but it

does not so appear from any ordinary point of view—the Rothhorn, in fact, seeming insignificant from almost everywhere.

These rock fronts must not be looked at from too far away. Unless they subtend a high vertical angle to the vision they produce little effect. But stand beneath them, and what pomp and power they display! You must be near enough to see the details of their structure, and to trace the joints of their masonry, for it is in the recognition of their upbuilding, stone by stone, that their impressiveness consists. That is why a snow-slope drawn down across the edges of their strata is so little to be desired. If by good-luck the successive strata vary somewhat in colour, the cliff will be magnified thereby. To the perception of multiplicity recurrent detail is essential, and that perception involves relative proximity and is helped by familiarity. The oftener you stand beneath such a wall the bigger it appears to grow.

It is not a thing that can be painted, still less photographed; for no painter could set down details enough, and the camera will not select the right ones. It is the horizontal details that we want. If the reader will observe how a high tower or other lofty building impresses its scale

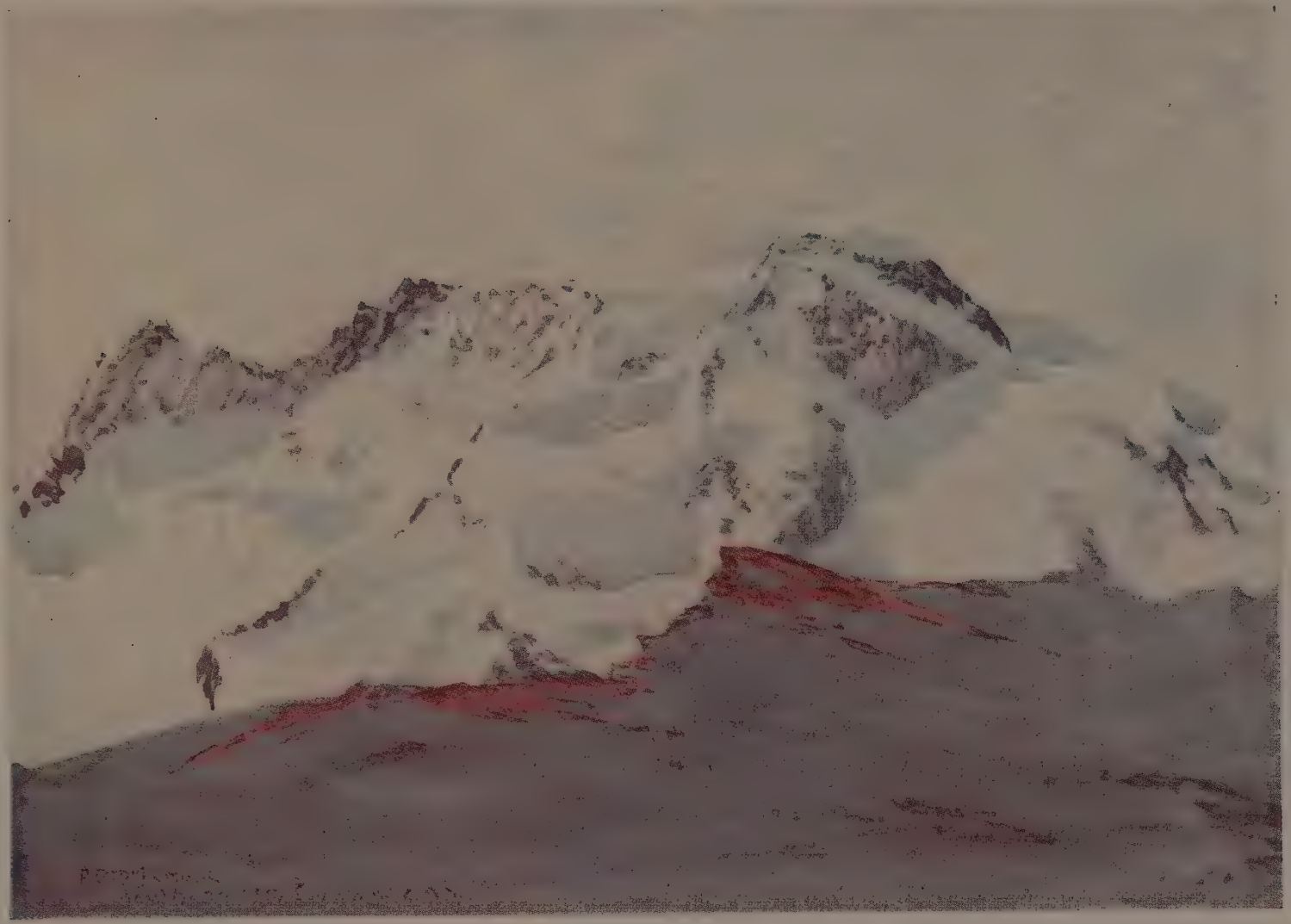
upon him, he will find it to be by the joints of its masonry, unless indeed he be standing far off and the tower is seen to rise high above the houses of a town whose size is instinctively perceived. Here again the accomplished climber who has actually scrambled up the sheer face of such a cliff and so measured it against his own slow progress and his accumulated fatigue, has an advantage over any mere spectator. This advantage is increased by the fact that he will recognise and know the size of many details of ledge and pitch which he has actually handled and surmounted. Such personal knowledge is the best of all measuring scales. A traveller who cannot attain it must be content with the lesser insight that can be attained by slow examination. In no case is the full effect to be perceived at once. Nature sometimes, as it were, flings herself upon our imaginations and suddenly overpowers us by her excessive grandeur. At other times she seems to say, "It is nothing"; so as to let superficial persons pass by; but just then perhaps we are in the presence of some superlatively great exhibition of her majesty which it requires experience, time, and attention to discover.

It should remove any tendency to conceit in those who have travelled far and seen much to remember

that, however often they may have beheld and delighted in glorious sights, the best-visioned of them and the most sensitive has missed far more than he has seen. What opportunities he must have had, and how relatively few of them has he utilised! At best he has been but like a traveller in a motor-car, whisking across historic lands, and passing here by an abbey, there through some old town, there again over some historic battle-field, and not suspecting their existence, or not knowing enough to thrill with the rich emotions they would excite in a better-informed mind. It is not the eyes that are lacking, but the knowledge and the time to acquire it. You may scurry along below the cliff of Pelmo without a flutter of the heart. But wander half a day beneath it, examine its details, watch the sunlight playing on its ledges, and the shadows in the gullies that cut them, a sense of its grandeur will invade your consciousness, and the memory of that will remain with you till you turn childish with old age and others know that you have lived too long.

Whatever the dignity of these great walls, when suitably beheld, the peaks they belong to, if their summit crests are long and flat, are not comparable for individual beauty of form with the snow domes

THE BREITHORN FROM SCHWARZ SEE



or the ridged pyramids. They have, however, an importance and perform a function of their own in any large mountain panorama of which they form a part. Before me as I write there chances to lie Donkin's photograph of the view from the New Weissthor, looking down the Gorner glacier. The pyramid of the Matterhorn is on the right; the wall of the Breithorn is in the midst; the curdled snow-face of the Lyskamm is near at hand on the left. It is not by any means a perfect natural composition, yet it does fix the attention, and a moment's thought shows that it does so by the marked contrast between the forms of the Breithorn and the Cervin. Blot either of them out and the character of the view is changed.

I well remember standing, one very clear day, on the summit of a relatively high peak in the icy heart of Spitsbergen and surveying a vast panorama. The peaks in it being all actually small (though not appearing so) and the area of the panorama very large, the multitude of peaks in sight was numerically much greater than in any Alpine panorama, not excluding even that from Mont Blanc. In one direction the mountains happened to be all of one character. Each was similar in form to its neighbour. Some distance

further round was another group formed of peaks as various as are the Alps. It was at once obvious how much the variety added to the picturesqueness. The same lesson can be learnt from the top of Monte Viso. Look southward and you will behold, ridge behind similar ridge, a remarkable uniformity. Face northward and round to the east, the effect is one of infinite variety. Such variety, contrast of walled peak with pyramid, of pyramid with dome, here thronged together, there sundered by some wide stretch of lower elevation, entertains and stimulates the observer's mind.

Sometimes the repetition of a form with only slight change has the value of emphasis, or, as in the case of minor ridges dividing couloirs or side glaciers, it binds the composition together and forms a kind of warp and woof for Nature's detailed embroidery. The value of repetition is instinctively felt by most in the case of a pair of peaks, standing side by side and visibly linked together by some high connecting ridge, or apparently linked by what seems to be a ridge but is really produced by foreshortening. They are frequently named "the Twins." A notable instance of such a pair is the Dom and Täschhorn.



THE LYSKAMM

From the Riffelberg. Gorner glacier below.

Stand anywhere commanding a view down the Zermatt valley, where you can see this pair of peaks defining it on the right, and the Weisshorn's delicate and single pyramid opposed to them on the left, and you will at once recognise how much the great pair and the single peak gain by contrast with one another. Or climb (I should now say take the train) to the Gorner Grat and look abroad to the south. How much less effective would be the panorama if the two long walls of the Breithorn and Lyskamm had a third similar wall between them instead of the coupled domes named Castor and Pollux.

It would be easy to continue this fanciful classification of Alps and discussion of types for another fifty pages, but it would serve no useful purpose. Long before this the reader has probably been objecting that it is an unscientific and incomplete classification, and that most peaks could be made to enter all the categories if regarded from suitable standpoints. Such, in fact, may be the case. My object in thus writing has merely been to suggest cross-routes and byways for the memories, fancies, and future observations of my readers. The mountains for us who love them are the playthings of our fancy. We may do

with them what we please. They excite in us the sense of beauty, and we try to tell of the emotions we have felt in their presence. Those emotions quickened by them, how we know not, in fact arise in us. We are free to make of them what we please, to give them any kind of play. They are then bound by no scientific laws. A mountain may be a chunk of granite heaved up by I know not what play of forces and carved out by a perfectly orderly denudation; but to me, if I please, it is a Maiden, an Ogre, a Golden Throne. I can endow it with a character, and reckon up friends and foes to it amongst its neighbours. Or I can call it a fairy palace, and people it with sprites and dancing creatures of gossamer clothed in the dawn. No one can say me nay. Now and again, perhaps, I may whisper my dream to a sympathetic friend—but not often. For the most part we keep such heart-frolics of a happy hour in the inaccessible places of their origin.

Brother climber! we have secrets of our own, you and I—secrets that we never told to one another, even when we stood side by side together on the mountain-top. But there was a thrill within each of us, was there not? and each knew that with the other it was well.

CHAPTER VIII

PASSES

A PEAK is primarily a thing to be looked at. It was only after the aspect of peaks had smitten the imagination of men that the desire to climb them arose. The climbing impulse is subordinate to the eye's delight. A pass, on the other hand, is a thing to be climbed and looked from, but only in a minor degree to be looked at. It is an experience rather than a sight. Few passes indeed are striking objects in a view. The Col Dolent, the Güssfeldtsattel, the Col du Lion, and a few more are imposing when you approach the foot of their final slopes, but it would be difficult to distinguish between such slopes and a similar mountain face. The fact that the slope leads to a notch or saddle in the sky-line does not give it dignity ; that comes to it from its own character as a slope, and would be the same if it led to any

other kind of sky-line. Passes, therefore, in and for themselves, are not conspicuously striking and beautiful elements in any great mountain panorama, and do not call for discussion by us from that point of view.

As experiences, however, they take another rank. I have long been prepared to maintain their general superiority to peaks in that respect. Passes generally lead through finer scenery than is commanded from the flank of a peak. A peak climbed rewards you with a panorama which no pass can offer; but, that excepted, the average pass is superior to the average peak for the scenery it reveals, and in the nature of things it must be. In climbing a peak, unless you are going up an arête, you normally have a steep slope rising straight in front of you. A few square yards of rocks or snow fill most of your vision as you look ahead. If you raise your eyes up the slope, you see it in its least impressive form, foreshortened into a mere belt. The real view is behind you, and you must turn round to behold it. That involves standing still and may mean delay. But in traversing a pass you normally ascend the bottom of a glacier valley, and the fine views are ahead and on both hands.

The valley is not likely to be so narrow that you are not far enough away from its two sides, or at least one of them, to be able to behold the slope as a whole, from bottom to top, and not unduly foreshortened. Of course this general character of pass-routes is subject to infinite variation. The final slope is often steep, and the ascent of it will then be like the ascent of a mountain face; but, broadly speaking, it must be obvious that passes offer better chances for enjoying continuous fine scenery than peaks, and experience proves it.

Pass-traversing, to me, however, and doubtless to many others, seems to possess more elements of romance than peak-climbing; for this reason—to climb a peak is to make an expedition, but to cross a pass is to travel. In the one case you normally return to the spot whence you set out; in the other you go from the known to the unknown, from the visible to what is beyond. The peak, which is before you when you set out to climb it, is only explained, not revealed, as you ascend; but every pass is a revelation: it takes you over into another region. You leave one area behind and you enter another; you come down amongst new people and into fresh surround-

ings. You shut out all that was familiar yesterday and open up another world.

This is true of all passing over; it is of course especially true when you are making a new pass for the first time. Then you have to find the way down as well as the way up, and the interest is sustained to the last moment. It has been my good-fortune to have had opportunities of climbing many new peaks and crossing several new passes—one of them the longest mountain-glacier pass in the world. Beyond all question the passes have been more interesting and exciting than the peaks. When you reach the summit of your peak the excitement suddenly ends; on the top of a pass it only culminates. The long pass to which I have above referred took about a fortnight to reach from the highest habitations. We could see the saddle ahead all the time, and we slowly drew nearer to it. The wonder increased as to what we should find on the other side. Whither should we be led on? Where should we come out? What difficulties might bar our progress? Not till the very moment when we topped the ascent and stood upon the col could any of these questions begin to be answered. Nor could any of them be fully answered till the week of descent

THE ROAD FROM VITZNAU TO GERSAU

The *Obere nase* corner. Pilatus group in the distance.



had been actually accomplished. But the first sight over, the first glimpse into the new world, that was worth toiling for—that, and the last long regretful look back down the valley up which we had come, whose details had fastened themselves durably upon our memories.

What the travelling explorer in previously untraversed places feels so keenly is, after all, only a slightly stronger form of the emotion that every pass affords to every climber who traverses it for the first time. He awaits the arrival at the summit for the moment of supreme revelation. He has the same slow development of desire to see over; the same sudden burst of illumination at the top; the same regretful look back; the same pleasurable anticipation of novel experiences awaiting him on the descent. He too leaves one world and comes into another; leaves if it be but the home of a night in exchange for untried quarters. It is this similarity between ordinary Alpine climbing and new exploration that gives to the former one of its greatest charms. The fact that a thing is new to us suffices. It is almost, perhaps quite, as good to behold for the first time what we have heard speech of, as to behold what no one has ever

beheld before. We shall find friends to converse and share memories with about the one; we are liable to be considered bores if we talk too much about the other. The explorer writes his book and then dwells with his memories alone, but the Alpine traveller lays up a store of experiences and reminiscences, the pleasure of which he can share with a goodly number of friends, old and young.

Passes, like peaks, admit of classification. The first and most beautiful is the long snow pass, the kind of pass which is reached by ascending one long glacier, and from which the descent leads down another long glacier, so that the point of departure is as widely separated as possible from the point of arrival, and the divergence of scenery between the two extremities most pronounced. These may be called the great snow highways.

The longest snow highway-pass, and to my thinking one of the finest in the Alps, leads right through the heart of the Bernese Oberland from the Lötschen valley at one end to the Grimsel at the other. It is really not one pass but a succession of three, for three ridges have to be crossed—which, however, only increases its interest.

It leads through snow scenery of superlative pomp and extent, and reveals that scenery in the most fascinating manner, continually opening out and presently again closing up the wildest vistas, and always providing new interests and fresh culminations. Bietschhorn, Aletschhorn, Jungfrau, Finsteraarhorn, not to mention other less important peaks, in turn dominate the view, and one glacier after another opens out a vision of remote blue valleys and lower ranges. I am aware that this long traverse does not oppose to the climber the smallest real difficulty from end to end, and that it is what is commonly described as "a mere snow pound." It calls for endurance and that is all. Unless the climber counts scenery first among the attractions of the way, he will be well advised to select some other expedition. He who does so count it will agree with me that this is *par excellence* "the" pass of the Central Alps. It lacks only one element of charm: it brings the traveller down into the same kind of scenery as that from which he started. A similar remark may be made on the Strahleck, which is likewise a glorious snow highway. Both passes, it may be observed, are eminently suited for ski experts

to traverse in winter, under suitable conditions of weather and equipment.

To find the long snow pass in its most romantic form one must look for it in a region where a great mountain range divides districts of strongly contrasted scenic character. There can be no doubt whither we should turn. The great range that gazes southward over Italy and northward into Switzerland perfectly fulfils the conditions. This culminates along the watershed south of Zermatt, which place is therefore indicated as the starting-point at one end. Of the long snow passes leading southward from Zermatt, the Lysjoch undoubtedly takes first place for magnificence of scenery throughout the whole length of its route. Gymnastic climbers may ask, Why not the Sesiajoch? On the north its route coincides with that of the Lysjoch, but on the south they diverge, and the easier route lies through finer if less catastrophic scenery. The Sesiajoch plunges down a great wall, and the view does not vary for a long time. The Lysjoch leads down one of the loveliest glacier valleys in Europe and affords endless variety. There is really no comparison between the two.

We may therefore select the Lysjoch as type

of the noblest kind of Alpine pass. Consider what wealth of interest it supplies to those who traverse it from Zermatt at one end to Gressoney at the other; for to enjoy a pass properly it should be followed from village to village throughout its full length, and not merely from hut to hut. The modern method of zigzagging across the crest of a chain without descending far below the snow-line, taking one pass one day and another the next, is, I am aware, not without fascinations, to which who has not succumbed? but it is not the best way to enjoy scenery, for it lacks the enforcing emphasis which the exchange of levels yields.

It is of the essence of such a pass as the Lysjoch that it leads you from the foot of a great glacier, up through its whole length to its head, and then from the head of another glacier down to its foot. It thus traces a definite and natural succession of the features of a glacier. It is like following the course of a river from mouth to source, or passing through the progress of the seasons of a year. From step to step there is a succession of related features, each being another stage of the one before and of the one next to follow. Thus there is a growth of interest.

What you behold is not a mere succession of unrelated vistas. Each foreground in turn implies all that has been passed and all that is yet to come on the upward way. True, convenience generally dictates that you shall not actually enter upon a glacier at its extreme foot, and mount right up it to its head. There is probably better going for part of the way along the bank. But the glacier is commonly close at hand and in full view most of the time, so that you become familiar with it at all points of its course. To ascend it is to advance through stages of increasing glory and purity. First you have its shabby moraine-strewn extremity ; then its cleaner surface and open white crevasses. Higher up they turn continually bluer and the ice grows still whiter. The glacier widens ; the slopes that border it become less grassy. You are leaving the habitable, profitable world behind, and approaching the clean undevelopable lands, which man may visit but where he must not dwell. The naked crags stand forth on either hand, furrowed with snow couloirs, and clothed with white raiment. Now you come to the snow-covered surface of the glacier itself. Blue-looking pools of water may be seen here and there. The snow becomes

purer as you advance. There are no more dust-patches or groups of rocks interrupting the clean surface. Higher up, the glacier breaks into bolder forms as it pours down over steeper and more rugged slopes. The séracs tower aloft, fantastic in form and unstable in position. Great crevasses marvellously coloured in their depths yawn all about. You wind your way amongst them, creeping over snow-bridges and under impending walls and pinnacles of ice, all decked with sparkling icicles. Finally, you emerge on to some gentler-sloping, wide-expanding field of spotless snow, that only a gentle undulation diversifies with the most delicately displayed modelling. All around are steep slopes of snow or ice, cliffs of newly-riven rock, avalanche tracks and heaps of ruin. The details of the high peaks can be distinguished, their overhanging cornices, their furrowed sides. Ahead, and not so far away, is now the pass—a broad opening between great heaped-up domes of snow, perhaps with crests of rock cutting through. The slope grows easier. At last the ground is level, and a distant view opens before you as behind. You are on the top.

The ascent has been marked, as a morning's work should be, by steady growth of interest.

The descent, though it merely reverses the order of events and succession of interests, is not a simple inversion of the experiences of the ascent. It would be if you descended backwards, facing the pass, but such is not the human method of going. You now face downwards, and have before you the blue valley, the distant lower ranges, and perhaps some fragment of the broad lowlands in view, whereas in going up you look at the heights. The valleys promise rest and refreshment to your growing fatigue. The way becomes less laborious as you descend. You leave the snow behind gladly. The first flowers welcome you. And now as you quit the ice and traverse the high meadows the steady increase of fertility is delightful to observe. You enter the tree-level through a fringe of skimpy and wind-beaten scouts. The timber becomes finer as you advance. After all, this fertile earth is the place for man. Down you go into a new valley, the torrent hurrying and tumbling beside you. You come to a poor village and then to one more thriving. Fruit-trees begin to find place, and then chestnuts. How delightful it is to come down to the chestnut-level! It is then no far cry to the figs and the Italian lakes, and all the

AMSTEG IN THE REUSSTHAL

On the St. Gotthard Railway. Entrance to the Windgelle Tunnel above the last house on right of picture.



luxury of north Italian nature—its rich atmosphere, its colour, its suave forms, and picturesque surprises.

To cross thus and through such stages from the austere Swiss valleys to Italian frolic and ease, is to enjoy one of the greatest pleasures. You can do it by going over a peak, but clearly peaks are not natural passage-ways. They do not suggest themselves for traverse, whereas passes do. The whole idea of a peak is a provocation to the climber to get to the top. A pass invites him to come over; it calls from valley to valley. Who would ever think of going to a col and then returning in his tracks to the starting-point unless misfortune compelled him? The suggestion is absurd. Passes are the natural gateways of the hills—at first the easiest and lowest gaps; next the best gaps that could be found from valley to valley; lastly, any notch between two peaks, even if they are twin-culminating summits of a single mountain. Indeed, provided the point of crossing is a notch, so that, when you stand in it, you see a peak rising on either hand of you, you have the feeling that you are going over a pass—that the wall Nature has erected in your way has been overcome; and that feeling is the thing.

The broad portals of the great mountain highways offer, as I have said, and obviously must offer, scenery of the grandest and most logically consistent type along all the way; but there are passes of other kinds richly endowed with power to please. I would choose next, as a delightful type, the most opposed in character to the broad snow col,—I refer to those range-traversing routes which lead over steep mountain-walls. Such on a great scale for the Alps are the Col du Lion, the Domjoch, and the Col de Miage. I think, however, that the classical pass of this kind is the Triftjoch. It will at all events perfectly serve as an example of the rest. Seeing that, by definition, the final slope of all such passes is a steep wall, that wall, dropping from the watershed, must be at the end of some deep glacial recess. Herein lies the distinguishing feature of the way. The lower part of the route will resemble the lower part of any other pass, but ultimately somewhere in the *névé* region the traveller is led into a deeply embayed cirque.

The snow-field may and often does lie almost level at the foot of the wall, perhaps above some final ice-fall which it has been difficult to surmount. These high *névé* basins that look so

lake-like and restful in the heart of the hills are always lovely. Imposing precipices rise around them, and in fact feed them with showers of avalanches on active days. But in fine summer weather the avalanches have all fallen. The surrounding walls are like a defensive fortress, towering so high and steeply, and excluding the world and all its vicissitudes and violences. It is only a seeming, for nowhere, in fact, do storms eddy and surge with more violence than in these theatres of the mountains. But seeming is the very substance of beauty, and all the fine-weather aspect of these places is suggestive of peace. The further you advance the more completely are you enclosed. Sometimes a bend in the hollow may actually so shut you in, that no glimpse of the lower regions is to be seen in any direction. Such isolation is delightful for a while. Besides yourselves there is no other trace to be found of the existence of the human race, or of its ever having existed; you might be on the surface of the moon and discover nothing more indifferent to mankind and their motions. A few hours of sunshine will blot out every sign of your passing. This entire cleanness and invulnerability is specially delightful to men who have grown up in crowded cities,

where, save sometimes in the sky, the very reverse is the case, and nothing is visible that does not imply the handiwork of man.

The final climb is like all wall-climbing, and commands no view unless you can turn round; but so much the more does the last step tell, the step that lifts your eyes above the crest and suddenly displays to you the great vista on the other side. In peak-climbing, the views to right and left rapidly develop and approach as you near the top; it is only in the ascent of these wall-ended passes that the view is kept back to the last, and then suddenly revealed. In the case of the Triftjoch, as you climb to it from Zermatt, the result is even more than usually impressive; for what bursts upon your vision, right opposite to you, on the far side of a splendid and vast circle of snow-field, is the whole pyramid of the Dent Blanche, from base to summit, with its finest side turned towards you. For the view thus to burst upon the traveller with overwhelming suddenness, the steepness of the wall of ascent must be continued to the very top. If it rounds off for the last few feet, as sometimes happens, the effect is spoiled. The Triftjoch view is one of the best arranged, because the gap you pass through is

THE DENT BLANCHE FROM THE RIFFELBERG

July 22, 1903. The Dent Blanche and all the other peaks mostly engaged in powdering their heads behind a curtain of cloud. The water in foreground is not a lake, merely a pond of rain-water.



so narrow, and the distance is beheld as it were in a frame of rocks, which form a foreground. Most saddles of the kind are wider. Then the view lacks foreground and is no better than part of a mountain-top panorama. The narrow gaps are the ones to look for. They can be found all over the Alps, but not usually along the crest of the main ranges.

There is, however, a great charm attached to many passes across minor ridges. They enable an expedition to be made, out and back, from a single centre, with variety of scenery all the way—up one side valley and down another. The side valleys often deserve more attention than they get. A climber's natural tendency is to go for the big expeditions—the highest mountains and the greatest passes. It is worth observing that the greater the scale on which mountains are built, the more widely are the main features separated. Minor peaks and lower ridges have their different members nearer together. Juxtaposition often produces admirable results, and may educate the eye to look for effects on a great scale which have once been observed in little. After all, variety is the great thing,—variety and the emphasis that contrast gives to beauty of different kinds. It is so easy

to grow accustomed, so easy to become dull to an effect that is constantly before the eyes. How tired of ourselves, and one of another, we should become, if we were not always growing older! In the mountains, if we would have our sense of their beauty ever fresh, our appreciation of it ever keener and keener, we should alter our point of view: exchanging great for small, arid magnificence for fertile attractiveness, snow for rock, peak for pass, alp for valley. We should beware of specialisation. Why climb only aiguilles? Why scramble up nothing but rock-faces? There may be breadth or narrowness even in our play. We are likely to manifest in life as a whole the qualities that we show in sport. Why not make play react on life?

A highway-pass penetrates a range by help of a corridor, a wall-pass leads right over a cliff. These are the two most definitely marked types of col. We might feel ourselves compelled to assign most cols to one type or the other, if we allowed our freedom to be restrained by the bondage of scientific definition. There is, however, a kind of pass which I prefer to capture for a group by itself, though no descriptive name for it occurs to me,—I mean passes like the Weissthor

or the Col du Géant, which are approached by regular snow highways on one side, and fall very rapidly on the other. They and their like are always popular, and there are many of them. Their chief general characteristic is the contrast that must strike every one between the ascent and the descent, on one side and on the other, and between the views in opposite directions from the col. This side, you look down a glacier valley with a broad white foreground limited by a mountain avenue, along which some great glacier flows, winding away. That side, a cliff plunges from your feet, and such foreground as there may be consists of the nearest mountains before you. Thus the near view fixes your attention in one direction, the remote distance in the other. One is essentially a view among mountains, the other an outlook over the wide earth. One impresses by its wildness, the other by its extent. You keep facing about, and, each time you turn, the contrast of scenery enforces the charm of either outlook.

Obviously the right way to enjoy such a pass to most advantage is to ascend by the gentler slope and to go down the cliff. It is not the easiest way for the climber, who is likely to prefer to mount the cliff and descend the slope.

The technically and æsthetically best are here at variance. In ascending by the highway side the fine view is always before you, but if you go up the cliff nothing faces you but a few acres of snow and rock. On the contrary, when you descend the cliff, the uninteresting outlook is at your back and the fine view in front all the way.

The crest of some passes of this sort, notably of the Weissthor, is a point of vantage for enfilading a great mountain face. Usually one looks up or down such faces, or, being actually upon them, can only look a short distance to right or left. But from the crest of a suitable pass you may see the great curtain of ice and rocks edgewise, and the view has an impressiveness of its own. Those who have seen Niagara, or any wide waterfall of considerable height, will remember how fine it is to stand and look along the edge of it. Fronting it, you obtain a sense of its width; below it, you feel its force and volume; but in profile its grace is its leading quality. So is it with a wide mountain-wall. It is not enough to see it from below, or from over against. It must also be looked along. Then its surface modelling, its outsets and insets, its ribs and gullies, the meandering as well as the slope of its front become

apparent. Few great walls of this kind do not grandly curve round. They are most impressive when that curvature is apparent. Once thus beheld, a wall takes on a new meaning when seen again from some more common standpoint. It no longer looks flat. Its bays and buttresses become perceptible to the trained eye, which is thus better enabled to appreciate the complexities of form and the true architecture of any other mountain-wall afterwards encountered.

There remains but one more type of pass that appeals for special mention before our space is exhausted. It is the Couloir Pass, a col led up to by a narrow snow- or ice-filled gully. The Col du Mont Dolent and the Col du Lion are the grandest examples of the type, which however is not an uncommon one. For me these passes always possess singular charm. They are really a subdivision of the wall-pass group, but they arouse emotions altogether their own. Once in the couloir you are completely isolated, almost as though perched in the air. A wall of rocks close at hand shuts you in on either side. The steep slope rises in front. Behind, you look straight away to some far distance with nothing to interrupt the vision. So indeed you do from the face of a wall

or cliff, but the effect is greatly enhanced by your enclosure on either hand. The contrast between those near rocks to left and right and the absolute openness behind makes the steep drop of the slope appear much steeper than it is. Perhaps you may be compelled to remain for hours in the narrow gully. So much the more striking becomes the view revealed at the top and the sudden sense of being in the open. It has been implied that the couloir has to be ascended, for such is usually the choice, and sometimes the only wise choice; but it is far more delightful to descend one, with the view in front all the way and the valley bottom slowly approaching. Never is the depth beneath better appreciated than under such circumstances.

I have thus far been referring to passes from the climber's point of view, as leading from one mountain centre to another. Truly, however, the whole of a pass is the route through a mountain region from plain to plain. Few mountaineers nowadays ever cross a range in that way except by train, and yet it is one of the most delightful experiences. Motor-cars will enable us to enjoy such traverses by road, when the Swiss have learnt the wisdom of granting free passage across the Alps to any kind of

THE VILLAGE OF SOLDIMO, AT THE
ENTRANCE OF THE VAL MAGGIA



vehicle. It is only when a range of mountains is approached from the plain that its mass and geographical value as a dividing wall can be felt. Arriving by train among mountains is a very different thing, for you can see nothing from a train unless you are the engine-driver—all revealing views being necessarily ahead. Afoot there is usually some definite point, immediately perceptible, where you first come in contact with the slope. You enter the mouth of a valley; the hills reach forth their arms to embrace you, and you consciously enter a new world. Beside you is now a riotous river on the one hand and a steepening slope on the other. It is not long before you know that you have begun to ascend. The flatness of the valley's mouth presently changes into a gentle slope. At first the fertility of the plain accompanies you into the hills, but the fields grow smaller, the villages may be cramped for space and forced to adapt themselves to difficult ground, attaining a new picturesqueness in the process. Thus for long miles, hour after hour, and, in large mountain regions, day after day, the character of the scenery slowly changes. The mountains grow bigger; vegetation varies with level and aspect;

Nature grows more austere, and therewith more magnificent. You traverse some vast defile, like the gorge of Gondo perhaps, where road and river find passage beneath opposite cliffs, water-worn and of imposing height. You enter secluded basins, where the valley widens to close again; you pass round the margin of lakes that hold the hill-tops, as it were, in their depths. And always the flanking heights grow greater, and their tops, when visible, further and further away. Side valleys radiate, leading around romantic corners to invisible fastnesses. The slope of the main valley steepens again. You reach the foot of the forest region, the snouts of glaciers begin to appear, and high aloft the snows look down upon you. Now you traverse the last village and approach the foot of the glacier that fills your valley's head. You mount beside it through the tree-belt and out on to the grassy alp, then up that to the region of broken rocks and stones, and so to the margin of the snow. It is only the last stage of your traverse which now arrives, but that last stage is the beginning and end of the mere climber's pass. To you it means much more—it is the crest of the great range that you have been so long penetrating

FLÜELEN AT END OF LAKE OF URI,
SOUTH ARM OF LAKE OF LUCERNE

The pyramid of the Bristenstock in the background.
Föhn wind blowing.



to these its uttermost recesses. The final wall is before you, the great white wall that looked so ethereal, so cloud-like, when first beheld from afar. You toil up it, stand on the crest, and look abroad over the world of mountains. Then down to the stones, to the grass, to the trees, the high village, and the valley road. So onward again by the roaring torrent, down the ever more fertile, more luxuriant valley, till you come to the low hills and the wide flat stretches that at last lead you out on to the plain once more.

A long traverse of that kind is a real pass, a whole pass; nothing else is more than a fragment —a choice fragment it may be, but still a part and not the whole. The old mountaineers, such as John Ball, used to take their passes in this complete form. So did the old coach-travellers like John Ruskin in his early days. Now mountaineers scorn to waste time on so lengthy an experience and to remain for so long at low levels. It is not their way. They have continual business aloft. They leave to motorists that kind of expedition. What good-fortune, then, that motor-cars should have been invented in time to provide such possible delights for climbers when their days of activity are done.

CHAPTER IX

GLACIERS

INCIDENTALLY, in the course of the preceding chapters, glaciers have been frequently referred to, but they form so prominent a feature in Alpine scenery as to demand a chapter alone. For, in fact, it is the glaciers that most of us think about when we turn our minds to the Alps. Minor ranges have walls of rock as precipitous and grand, gullies as difficult to climb, valleys as beautiful and even as profound as the Alps. Other European ranges are for a longer or shorter part of the year snow-covered, and often deeply snow-covered, so as to present snow-arêtes, cornices, couloirs, and snow-slopes that might almost have been stolen from the highest regions of so-called eternal snow. The Pyrenees, if exception be made of one or two small glaciers of no importance, are practically a range of this sort. They possess fascinations,

and great fascinations, but lacking glaciers they lack what every traveller amongst them must feel to be the essential element of greatness. Where glaciers exist the mountains are of the grand style. A small Spitsbergen peak draped and surrounded by glaciers has a more imposing effect than a great tropical hill, three times as big, which lacks glaciers.

Snow that vanishes away before it is a year old is generally feeble-looking stuff. It is only snow with a history, snow that has weathered twenty hot summers, that really tells in a view. The first is a mere inert covering of the ground; the second is a mighty and moving agent. In short, the one is dead; the other is alive. A sheet of snow, lying where it fell, is amorphous. It might be twice the size or half the size and any single square yard of it would be the same. But a glacier, the moving accumulation of a score or scores of winter snow-falls, is a unit, and all its parts imply the rest. Increase or diminish the area and you must needs change every detail, just as the whole body of a man is modified when he begins to grow stout or to waste away.

It is not often that you can see the whole of a glacier in a single view, unless it be a very small

glacier. Generally you see only a part; but, to one who knows, that part implies the whole. When you see a man's leg you know that there is the rest of him round the corner; from the attitude of what is visible it is often possible to infer much about what is hidden. So, too, is it with a glacier. The more familiar a man is with glacier phenomena, the more certainly can he infer from the known to the unknown. How easy it is with a little practice to tell at a glance whether a bit of white beheld aloft is part of a glacier or merely a bed of winter snow that will presently disappear. The one is modelled by its own motion; the other merely borrows its modelling from the ground on which it lies inertly.

The sense of motion, unity, and life—it is when these are instinctively perceived in glaciers that a view of snow-mountains begins to possess its true significance. Before it had been discovered that glaciers move, people used to call them frightful, terrible, and so forth. Ignorance blinded men's eyes to the beauty that was actually in sight. Not knowing how to look, they could not see it. What forests, grass, and flowers are to the lower regions, that glaciers are to the higher —they are the vitalising element. Hence the

importance to the mountain-lover of learning to know glaciers and familiarising himself with their structure, their ways, and their moods. It is easy enough to declare that every form and movement of a glacier is determined by the action of definite forces—so perhaps are all the ways and doings of men. But we pretend that they are not, and talk of our whims and moods, and may take the same liberty of speech about glaciers.

Every climber knows that there are glaciers of all sorts and characters, and every mountain traveller knows that they behave differently in different climates and latitudes. In the Arctic regions they flow faster and spread more widely. They have a more viscous appearance to the eye. They bulge and swell at the lower end, so that no one would ever have invented the name "snout" for the termination of an Arctic ice-stream. Moreover they break very readily into crevasses, even upon gentlest inclines in their lower course, whilst high up they seem less ready to form ice-falls than in the Alps. Glaciers in Norway vary from the Arctic to the temperate character as you go from north to south. The glaciers of Lyngen resemble those of Greenland. The glaciers of Jotunheim are almost Alpine—more than Alpine, indeed, in

the development of their glorious ice-cascades, but less than Arctic in the outreach of their lower extremities. The glaciers of the Tropics, again, present peculiarities of their own, due to the fact that the ice evaporates rather than melts. Thus their surfaces are dry and almost granitic in aspect. Their towering séracs seldom fall. Avalanches are much rarer than one would expect. Glacier streams are insignificant. Thus it is in the Bolivian Andes and thus also in the regions of Kenya and Ruwenzori. In the great Asiatic mountain territory there are glaciers of many types, corresponding to the great variety of climates. Those of Sikkim seem to be almost of the tropical character. Those of the Mustagh are of the temperate sort; and there are many intermediate varieties.

Alpine glaciers are of the medium type, lying as they do half-way between the Arctic and tropical extremes. They have not the rapid flow of the Arctic nor the dry rigidity of the tropical sort. Their walls are not silent as in the Central Andes, nor thundered over by continual avalanches like those of the upper Baltoro. They are of medium size also. In a single day almost any of them may be ascended from snout to snow-field,

FURGGEN GLACIER ICEFALL

Furggjoch at top of picture.



and descended again. To explore their remotest recesses no elaborately equipped expedition is required. Yet they are large enough to be imposing, and penetrate deep enough into the heart of the hills to isolate their votaries completely from the world of human habitation. It is to this medium quality that the Alps owe much of their charm. This, too, it is that makes them an almost perfect mountain playground. Were they but a little smaller, how much they would lose that is most precious! Were they larger, how many persons that now can afford the cost and the strength to explore them would have to linger at their gates wistfully looking in. In area, too, they are large enough for grandeur and yet small enough for easy access. No part of them is beyond the range of a summer holiday, yet a commanding view of them is as apparently limitless as is the view from the greatest Asiatic peaks which, thus far, have been climbed. They are the only range of snow-mountains in the world thus blessed with moderation.

It is for this reason that the Alpine climber so soon acquires an understanding of glaciers as units. A novice, after a single year's Alpine

experience, can talk easily and with understanding of all the parts of a glacier. It takes twenty seasons to know them well, but the foundations of knowledge can be laid in one. The modern tendency amongst climbers is to devote their main attention to rock-scrambling; but those who have spent the best years of their life amongst mountains, generally end by giving their hearts to glaciers and the high regions of snow. The best advice that can be given to a young climber is, "Learn to know glaciers." They offer the strongest contrast to the ordinary surroundings of life. They present the most varied phenomena. They most readily impress the imagination. They are the vital element, the living inhabitants of the high world.

If elsewhere I have praised the charms of contrast, of passing from low to high, from fertile to barren, let me here exalt another method. Who that has tried it will not agree that it is likewise well, sometimes, to hide oneself in the very heart of the upper snows, and there dwell for a while apart from the haunts of men? Formerly this was difficult to accomplish, but now, in the Alps at any rate, it is easy; for well-found high-level huts are many. Such, for instance, is the

THE GLETSCHERHORN FROM THE PAVILION, HÖTEL CATHREIN, CLOSE TO CONCORDIA HUT

One of the finest situations for views of the ice-world where no climbing is required.



Becher Refuge, planted in the midst of the Tirolese Übelthal glacier, or the Kürsinger Hut, on the north slope of the Gross Venediger. Settled in either of these, you are in the midst of the high snowy world. The *névés* are within a stone's throw, and the final peaks may be gained by a morning's walk. The Concordia Hut (now Hôtel, I believe) is similarly situated; whilst the hut on the top of the Signal Kuppe of Monte Rosa is yet more highly elevated. It is easy to spend a day or two in any of these huts, and so to pass before the eyes the whole daily drama as it is played upon the heights. So easy is it, that one wonders why more mountain-lovers do not avail themselves of the opportunity. The drawback, of course, is that such a hut is a centre of human activity. You forsake the hordes of men below, only to join a colony above. Solitude in these places is not to be had except in bad weather.

There is one way, and one only, by which fully to experience the long emotion of a dweller in the heights: it is to camp out. Few, indeed, are they who have tried it in the Alps. Some have slept in a tent on the mountain-side before a great climb; but they are fewer now than a score of years ago. It is not, however, to such brief lodging I refer;

but to a settlement made and victualled for several days. Mr. Whymper, I believe, is one of the few English climbers who has spent many days together with a tent at high altitudes in the Alps, and he has not published any notice of his experiences. It is a thing I have long wished to do, knowing so well the charms of such life in other mountain regions.

From a high-planted camp you can climb if you must, but you can also enjoy yourself without climbing. To awake on a fine morning in the midst of the snow-fields and see the coming of day at leisure, with no preparations to be made for immediate departure; then to watch the sun climb aloft and flood the depths of the valleys with its glory; to spend the whole day at leisure in the vicinity of your tent, strolling now to look into some bergschrund, now to scramble on to some neighbouring point of rock, returning at intervals to dine, or read some pleasant book, or to sketch in the shadow of the tent;—that is the way to let the mountain-glory sink in. My climbing days on the heights have left me pleasant memories enough, but the high-level days of idleness have been more delightful, even when they were days of storm and driving snow.

THE TRUGBERG

Looking up the Aletsch glacier from corner of Märjelen See.



To be in the midst of a storm at a high altitude is a wonderful experience, which all climbers pass through sooner or later; but it is an uncomfortable experience. When you are camping-out high up you can enjoy a storm far more easily. I have sat warmly in my sleeping-bag and looked out for hours through a chink of the tent-door, fascinated to watch the whirling of the snow and to listen to the wild music of the gale. It is not the fine weather alone that is fair. There is a yet grander glory in the storms. What can be more superb than to watch the oncoming of such a visitant, to see the white valleys and dark precipices swallowed up in the night of its embrace, to feel the power of its might and the volume of its onrush, and to see and feel all this with the sense of security such as a limpet may be conceived to feel in the presence of waves breaking upon it? Who would not wish to spend a few hours in the Eddystone Lighthouse in the midst of a December gale? That would surely be worth while; like standing beneath the Falls of Niagara.

Equally wonderful is it when the winds are still and a white fog envelops your little camp. Then you know what it is like to be alone. Above, around, and below all is impalpable whiteness.

You might be floating in the air on a bit of snow-carpet for all the eye can tell you to the contrary. Never is silence more emphatic, not even in the darkest hour of the night. The ear strains with listening and hears only the pulsations of the heart, till some distant falling stone or rumbling avalanche, some crack of a new-forming crevasse, some slight shifting of a near snow-bed, sends a shiver through the air. And then, perhaps, there is a writhing in the mist and shortly forms emerge. You cannot tell at first whether they are tiny objects near at hand or remote masses. Under such circumstances I have mistaken a little fragment of paper drifting along the snow for a polar bear! Presently avenues of clearness open up to close again. Finally, the mist grows thin and glittering, the sunshine penetrates it, there is a moment of scorching heat, and lo! all is clear, and the great world around is perfectly revealed.

What beauty there is in the great snow-fields that wearied waders through their soft envelope are in no condition to appreciate! For to be seen at their grandest they must be seen in the full glare of mid-daylight, when details are swallowed up in radiant, all-enveloping splendour. Every one

PALLANZA—SUNSET



knows the glory of overpowering sound. For that orchestras are enlarged and choruses increased in number. Who that has heard the full-throated music of ten thousand men, singing as one, will forget the majesty of that voluminous sonorance? The thunder of great guns is used, by common consent, to express the salutations of a people. What is true of sound is also true of light. Great views are ennobled by the splendour of full sunshine. There is an indescribable charm about desert sunrises and sunsets, but the glory of the desert is greatest at noon when the sunshine seems to swallow up the world and almost to hide it in excess of brightness. As with the deserts so is it with the snow-fields. When the eye can barely suffer to rest on them, they are most impressive. If there be specks of dust upon the snow, they disappear then from vision. With the brightness comes perfect purity, and the very idea of possible contamination vanishes away.

Reference has been made above to the beauty of linear form presented by many mountains projected against the sky. The great snow-fields have a beauty of surface form, a delicacy and perfection of modelling, far more remarkable. The graceful outline of a rock-peak, such as the

Matterhorn, is, after all, a conception based upon a fact. The actual outline is a line elaborately jagged, which the eye converts into a continuous curve by purposely neglecting to observe the small indentations. But the curvature of a *névé* is often apparently perfect. Its slight imperfections are too small for the eye to see even when they are looked for. Where it curves over, the outline of its edge is as delicate as any line that can be fashioned by the most elaborate artifice. No razor's edge is apparently more true. So also are the surfaces, in the perfection of their rise and fall. Not more perfect are the heavings of the last dying swell on a calming tropical ocean. But the swelling of the snows is still, and can be watched from dawn to eve with the incredibly delicate shades upon it that change with the hours yet never grow coarse, only towards the day's end they become blue and bluer, till the pink lights of sunset melt against them before the pallor of night comes on.

The details of the snow-fields are few, except when the surface is forced to break up by submerged inequalities of the glacier's bed. Then *névé* ice-falls are formed, which are far more majestic than the ice-falls of the middle region

KRANZBERG—ROTTHALHORN—AND
JUNGFRAU: SUNSET



(such as that of the Col du Géant). The high ice-falls are always deeply covered with recent snow, and the broken white mantle upon the tumbled chaos produces mysterious hollows and gives rise to long fringes of glittering icicles not elsewhere in summer to be seen. To gaze into a crevasse in such a situation is to look into a veritable fairy's grotto, where the recesses are bluer and the walls more white than the memory ever avails to recall, and where the icicles seem to be hung for the very purpose of sublime decoration. Glimpses of such sights are often granted to the mere climber as he hastily scrambles over a bergschrund by an insecure snow-bridge; but he has no time to stop for half an hour and let his fancy play truant in the depths. To do that, one must be living aloft, with all the day to spend as one pleases, no peak to attain and return from, within short time-limits, and no companions to say "Hurry up."

Perhaps these pages may have the good fortune to inspire some mountain-lover with the wish to camp out aloft. A suggestion may, therefore, not be out of place. Let the intending high-level resident choose the situation of his camp with care. It must be out of the way of excursionists,

or he will be invaded by continual visitors, who will expect entertainment and will thus deplete his stores and spoil his solitude. It ought not, however, to be difficult of access, or the problem of revictualling will be complicated and expensive. Such a camp should consist of two tents—one of them for guides or porters. The traveller's tent should be solid, and should possess a double roof or fly, so that it may be occupied with comfort in the hot hours of the day. It should be so firmly planted that no gale can overthrow it. Its furniture should be sufficient for comfort. Do not plan to move on from day to day, but settle down for a week or more at one spot, where there are rocks for a tent platform, and short scrambles that can be safely undertaken alone. Let the snow-field be near also, a snow-field that can be traversed on *ski*, and do not forget to take the *ski* with you, nor fear that you will not be able to use them on fairly level ground without previous practice. Keep a man with you to fetch water and do the rough cooking, so that all your time may be your own to enjoy to the full a rare opportunity which may not come again.

The middle region of the glaciers is the region best known to the votaries of the Alps, because

it is the most accessible from the popular hotels. This middle region may be defined as limited by the snow-line above and the tree-level below. It is therefore larger towards the end of the season as the snow-line is pushed up by the melting of the winter snows. On the Aletsch glacier it roughly corresponds with the stretch between the Belalp and the Concordia; on the Gorner glacier with the corresponding stretch between the Riffelhorn and the foot of Monte Rosa. Its characteristic features are the open crevasses and the flowing or standing water on the surface of the ice. This is the place to come to for glacier picnics. It is the paradise of the moderate walker or the superannuated mountaineer. It is a safe region for the experienced to wander over alone, and for the inexperienced to visit with experts. You can start late and be back early. You need not venture forth before the weather has declared its intentions. Hence it is the popular glacier belt, and its beauties are best known and most widely appreciated.

If it lacks the aloofness and romance of the *névés*, it possesses ample charms of its own. The impressive silence of the heights is here replaced by a chorus of the voices of many waters. The

large simplicity and sweeping forms of the snow-fields give way here to a multiplicity of detailed forms that require time to appreciate and understand. Every step in this area yields a new wonder, a fresh incident, another surprise. All around is continual change as you go along. There is no end to the features that demand and reward your attention. No wonder that glacier wandering at this level should be so popular an amusement.

What is its principal and characteristic charm? Undoubtedly the water, and the phenomena to which it gives rise. To begin with, there are the streams, small and great. The little trickles, that creep between the lumps of the uneven surface and deepen the furrow dividing them. They flow and unite together like the veins of a leaf, thus giving rise to larger arteries, and these by their union to yet larger. Thus the main drainage torrents are formed, which, on great Arctic and Himalayan glaciers, become veritable rivers, impossible to be leapt over or forded. The beds of these torrents are blue in colour and like transparent glass in aspect—a lovely contrast with the general surface of the glacier. For that is made white by the innumerable fissures that penetrate its surface,

due to the dissolvent effect of the sun's heat, from which the icy water protects the bed of a stream. It is a favourite pastime to sit beside such a torrent and watch the water flow by between its white banks, one in bright sunshine, the other, perhaps, in shadow, with the blue ribbon of transparent ice between them and crystalline water scampering along with an aspect of joy in freedom.

But there is a grim fate in store for it not far ahead. It must make haste to laugh in the sunshine while it can, and to display its short-lived clearness. Next time we see it, it will be thick and unclean with sediment, and far below in the valleys where men live and work. Little, however, does it seem to care as it hurries and dances along, and throws up its little glittering, splashing hands into the air. We follow it downward, and soon hear a musical booming not far away, like the note of a deep organ pipe. It is a *moulin* or pot-hole, a cylindrical perforation of the glacier into which the torrent leaps, and where it disappears, to flow thenceforward in darkness along the rocky bed of the glacier, till it reappears at the snout into the open valley.

Even lovelier than the streams are the pools on

the surface of a glacier, when they have a clean floor unsoiled by moraine or sandy deposit. These pools are sometimes of large dimensions. They, too, have blue basins with white edges. Looked down upon from a distance, they appear like great sapphire eyes gazing at the heavens. Seldom, if ever, in the Alps are such pools found in the *névé* region; to behold them there, one must go to Arctic glaciers, of which they form one of the chief glories. If the lakes on the Gorner glacier do not equal those for purity or perfection of contrast between untainted blue and unsullied white, they are none the less most lovely. Sometimes a lake may be found not on but beside a glacier, where the ice forms one bank and the mountain another. Such are the Märjelen See by the Great Aletsch, and the little-visited lake at the west foot of Monte Rosa. On these you may see floating or stranded masses of ice, and perchance find one that has recently turned over, displaying its blue part that was before submerged.

Now and again, if you look for them, you will find crevasses filled with water, whose depth renders up a yet bluer tone than can elsewhere be met with in the regions of ice. Perhaps, at one end the crevasse will be roofed over, and

MÄRJELEN SEE AND GREAT ALETSCH GLACIER

Winter ice not yet melted on the lake.



there you may gaze into the deep shadow and find the blue deepen almost to black. If you drop in a stone, you may hear the bubbles come rippling up and the wavelets lapping against the sides. If the roof be thin enough, a hole may be made in it with the ice-axe, and a beam of sunshine admitted which will increase the scale of the harmony in blue. Well do I remember one glorious pool of water, roofed over with a dome of ice, through which the sunshine glimmered. At one side was a natural portal, at the other a window. Two or three white blocks of ice floated on the water, and its uneven depths were of all tones from sky-blue to black; but that was in Spitsbergen, where glacier details are far lovelier than the Alps can show.

But the middle glacier region, the region of what is fantastically called the "dry glacier," presents other charms than those of water. Note, for example, the brilliance of its surface and the peculiarity of its texture. It consists of an infinite multitude of loosely compacted rounded fragments of ice with a little water soaking down between them. If you watch it closely, you will see that the moving water makes a shimmering in the cracks between the ice-fragments. You will also

observe that the blue of the solid ice below the skin of fragments appears dimly through the white, and the least tap with an ice-axe to scrape away the surface reveals it clearly. Each little fragment of ice has a separate glitter of its own, so that the whole surface sparkles with a frosted radiance. It is not the same at dawn after a cold night, for then there is no water between the fragments, but all is hard and solid. No sooner, however, does the sun shine upon them, than the bonds are released and the ice-crystals begin to break up with a gentle tinkling sound and little flashes of light reflected from tiny wet mirror-surfaces. One can spend hours watching these small phenomena as happily as gazing upon the great mountains themselves. Size is a relative term. The biggest mountain in relation to the earth is no greater than is one of these small ice-fragments in relation to a glacier. Reduce the scale in imagination and the smallest object may be endowed with grandeur, for all such conceptions are subjective.

The open crevasses that are never far away on the dry glacier are full of beauties. It is not easy to tire of peering down into them. Sometimes one may be found into which a man armed with an ice-axe may effect a descent. He will not stay

there long, for the depths are cold. Once I was able not only to descend into a crevasse but to follow it beyond its open part into the very substance of the glacier. It was a weird place, good to see but not good to remain in, and I was glad to return to sunshine very soon.

The moraines and scattered stones that are frequently encountered on the dry glacier are more interesting than beautiful. It is well to make the acquaintance of the medial moraines and to scramble over them, first for the wider view that one gets from the top, and next in order to realise their dimensions, always larger than one expects. Seen from a distance medial moraines look smaller than they are. The eye must be educated to realise their true dimensions. When that has been accomplished, the great scale of the glacier that carries them can be felt, but not before.

There is generally a breeze blowing over a dry glacier, so that when the pleasant luncheon-hour arrives, a sheltered spot must be sought out, one open to the sun and protected against the breeze, with good water near at hand, and stones of convenient dimensions for seats and tables. Experienced wanderers will detect such spots far sooner than novices. It is with them as with good

camping grounds: they are not easy to identify at a glance, but they are well worth hunting out.

So also is it with points suitable for photography. A dry glacier is full of details for a camera, and yet how few good photographs does one see taken at this level among the mountains, unless they be distant views. Nowhere are there better foregrounds to be discovered; yet when they are looked for, how hard it is to find them. The composition is generally faulty in the inexperienced amateur's picture. But those who are experienced in the art seem to find suitable foregrounds everywhere. It is the result of much taking thought.

Generally it happens that the return from a day's glacier wandering leads up the hillside along the margin, so that as we ascend, the area of our adventures spreads itself out below, and the eye can range over the whole of it at once. We look for the place where we lunched, for the broad streams with difficulty crossed, for the large pools we looked down into. They are not often discoverable. What looked so important near at hand has shrunk to an insignificant unidentifiable detail. The river is one of hundreds of the same kind. The pools are innumerable. The

moraine stretches along for miles, and one of its mounds seems like another. We thus begin to realise the size of the great icy expanse. Our track over it has revealed but little of the multitude of sights there are to see. We have but glanced at a few samples out of countless thousands. Were we to return on the morrow we could not retrace our steps, nor find again the objects we saw to-day. For a moment the grand scale of the glacier imposes itself upon us, but before night has gone we shall have forgotten it. Only by coming again and yet again does it gradually sink into our understandings and become a part of the habit of thought with which we approach the Alps.

CHAPTER X

ALPINE PASTURES

It is to be feared that the reader, whose persistence has availed to carry him thus far through the adventure of this book, may bring an accusation against me, on the ground that each form and type of scenery, as in its turn it has come to be discussed, has been described in language of too superlative praise, as though it and it alone were pre-eminent above all other Alpine forms and types. Let me forthwith confess that the accusation is well founded ; for the fact is that, whether the attention be turned upon peaks of rock or domes of snow, upon cliffs or aiguilles, upon snowfields or ice-falls, upon passes, alps, or valleys, the kind under immediate consideration always seems the finest, the central type and the most beautiful. We quit the valleys for the high snows in search of beauty. From the heights we return to the

THE CASTLE OF ZÄHRINGEN-KYBURG,
THUN



valleys on the same quest. Everywhere we may find it, and to find it is all we need ask; for it is like pure gold, whereof no fragment is intrinsically more precious than another. Each new-found nugget seems for the moment best of all.

Beauty is not the prerogative of any zone or level of the mountains more than of any other. It is of different kinds in different regions, but not of different degrees. Some kinds may appeal to one man more than other kinds, but these in their turn will be preferred by a man of different disposition, and neither can boast that his taste is superior. Youthful vigour may find the keen consciousness of beauty most readily arising after difficulties have been overcome. Age may feel its sense of beauty deadened by toil. In neither case is the power of appreciation to be regarded as a test of the quality of the beauty perceived; it is merely an indication of the character of the person perceiving it.

The normal Alpine climber is more sensitive to the beauty of the high regions than to the beauty of low levels. Nor is the fact surprising. He values that which he wins by toil, as is the natural habit of man. Yet he will by no means deny that there are beauties of the valleys and

the middle regions, though he may freely confess that they appeal to him less powerfully. But even he, lying upon some high pasture or in the borders of a wood on some off-day, when the sun shines brightly and the peaks that he knows and loves look down upon him through a clear atmosphere, will realise consciously enough the fascination of the scene. The beauty of the middle region, however, stands in need of no apology, of no lengthy recommendation, for this is the region which the ordinary traveller most frequents and specially associates with his Alpine ramblings. The valleys are the home of the tripper; the alpine pastures, of the tourist; the snows, of the climber. Each class perhaps looks down upon the one below, but each is well rewarded and may rest content with what it receives.

The grassy region between the belt of forest and the snows is known in Switzerland as the alps or high pastures, and it is from these "alps" that the great mountain range of Central Europe takes its name. An alp is essentially a summer grazing ground. It is the locality of cattle and horses, sheep and goats. A high Alpine village without an alp is an exceptional place. The normal village needs an alp for its equipment as much as

it needs fields and woodland. The fact that there is an alp for summer grazing enables the grass lands at lower levels to be used as hay-fields; thus a supply of winter feed for the cattle is procured. Hay is also cut on some of the lower alps, but that is an exceptional use.

The easily accessible alps are grazed by cattle. Highest alps whither cattle cannot go, or where frequent precipices surround the beasts with danger, are reserved for sheep and goats. Goat-alps are sometimes islands in the midst of glaciers, as, for instance, those at the foot of the Breithorn and the Twins along the south side of the main Gorner Glacier. Oftenest the alps grazed by sheep and goats are high up in the immediate vicinity of the snow-line, little patches of grass in a wilderness of rocks, or broken up by precipices. Some great grassy places at the ordinary cattle-alp level are so isolated by rock-walls that cattle cannot be taken to them with safety. Large flocks of sheep will then be found there. Such, for example, is the Muttenalp above Thierfehd in the Tödi district, which is grazed by some 1500 or 2000 sheep. A single shepherd looks after them, and is almost entirely cut off from the lower world throughout the long summer months. The alp in question

lies in a hollow of the hills, with terraced slopes rising like an amphitheatre from a grassy hollow, only accessible from below by a giddy path. There would be grass enough here for many cattle if the path could be cheaply improved.

Nothing in the Alps is more lonely and forlorn in aspect than are these high shepherds' huts. They are always wretchedly built. The lads or men that occupy them are the poorest of their village and the worst clad. In an alp where cheese is made there is plenty of work to fill every hour of the day; but a shepherd who lives aloft and does not have to drive his flock back to the village every day, finds time hanging heavily on his hands, and acquires a forlorn expression that matches his attire, his surroundings, and the miserable weather which so often envelops him. Those of us who climbed among out-of-the-way parts of the Alps in the seventies or earlier often had to take shelter for the night in shepherds' huts, and very uncomfortable they were. But modern climbers hardly know that such refuges exist.

One such hut I well remember at the head of the Ridnaunthal in Tirol. Now there are no less than three luxurious climbers' huts built beside or near the glacier further up. The old shepherd's

hut has fallen to decay. Only a fragment of one of its walls was left when I passed the place recently. Modern comforts, however, are not all clear gain. To sleep a night in the old upper Agels alp was not a comfortable experience, but it had its recompenses. The rough stone-built cabin was perfectly in harmony of aspect with its surroundings, as a club-hut is not. Built out of the stones that lay around, its crannies stuffed with moss, its roof formed of slabs and sods, it seemed a part of the mountain landscape, a natural growth rather than an artificial structure. A philosopher, ignorant of the conditions of life there, might have argued that the hut had been invested with an intentional protective coloration and form. The hut was hard to find, hard even to see when you were looking straight that way. It stood in a gorge upon a sloping grassy shelf, clutching a dark rock-cliff, as though it feared to slide down and tumble over into the roaring torrent. There was another dark cliff over against it, and the gorge curved round, so that you could not see far, either up or down. Everywhere the dark rock-cliffs shut it in, and only the minimum of sky was visible overhead, as it were poised on cliffs. There was always a bitter wind blowing when I was there,

and always the river roaring, and its spray rising to the door of the hut like a wet cloud.

The entry was by a low and narrow door, and there was a tiny window beside it. A little passage or track led from the door down the room to the fire at the far end, where cheese was made of goat's milk. On one side of the passage was a bed of hay, retained by a board. On the other were some shelves fastened against the wall. The door did not fit, and the walls were full of holes through which the wind whistled. It was indeed a wretched shelter; but we slept well enough within it, rolled up in our wraps. The hospitality of the simple peasant was as hearty, his welcome as warm, as his means were exiguous. No one sleeps in these goat-herd huts any more. Climbers have provided better accommodation for themselves, but in so doing they have lost that intimate touch with the life of the mountain-dwellers which a former generation learned to enjoy.

When now we speak of alps, it is the cattle alps that are generally intended and understood. These cattle alps are of all sizes and descriptions, large and small, relatively high planted or relatively low. Some, like Moser's alp above Randa, belong to an individual and afford grazing only for a few beasts;

but most are the property of the commune and are worked co-operatively for the benefit of all the cattle-owners who may wish to send their cows aloft to graze. Most alps are divided into two levels, a lower and a higher. The cattle are driven to the lower alp for the beginning and end of the summer season, to the higher for the middle weeks. Every such alp must be supplied with the necessary buildings for the accommodation of the herdsmen and cheese-makers, and generally for the cattle also, though in some parts of Switzerland the cattle are left out in the open throughout the whole summer season. Pigs are usually kept at a cattle alp to consume the refuse of the whey. An old woman once told me that pigs are "the fourth child of milk," the other three being butter, sérac, and cheese. What with the coming and going of the cattle, the pigs, and the herdsmen, the milking at dawn and eve, and the cheese-making that follows, a cattle alp is a very busy place. Some are better equipped than others, but in almost all one finds a shake-down on hay, a fire, and good shelter against all possible inclemencies of the weather. The immediate neighbourhood of the huts is liable to be dirty, especially when there are pigs, and at certain seasons there is a plague of flies in the hot hours of

sunshine. But, as a rule, these discomforts infest only a very small area, and it is enough to pass beyond that to escape them.

Now that the throng of climbers is so great near the fashionable centres, cattle alps are unsuited to accommodate them, and club-huts or even hotels have been built for their service. Yet even now a climber who quits the beaten track often has an opportunity of spending a night under the conditions which were universal in the days of the Alpine explorers. To climb the mountains without associating with the folk whose lives are passed upon their lower slopes is to lose half the pleasure of mountaineering, as I shall attempt to prove in the next chapter. Valley-life is not widely different from life in the plains. It is the life on the alps that is characteristic of the mountain-dweller. There the peasant learns sureness of foot. There he grows familiar with the aspect of the high peaks and the glaciers. There, as the years pass by, he becomes differentiated from the man of the plains. No one can really acquire the mountain-spirit who has had no contact with the people of the alps. That spirit does not reside in the club-huts, one of which is already in telephonic communication with a Stock Exchange—a



CHALETS AND CHURCH. RIEDERALP



foretaste of what the future will bring to others. The great charm and recreative power of mountain-wandering arose from the fact that the climber cut himself off from the life of the Cities of the Plain and exchanged it for the life of the hillside. He came into communication with another set of men, with other habits, other ideals. Each year that passes in the Alps makes that change less considerable and by so much the less salutary.

The crowd of holiday visitors to Switzerland tends to settle in the high pasture region more than was the habit thirty years ago. Formerly hotels flourished in the valley-bottoms, in villages or close to them. Now they are built with ever-increasing frequency upon the alps. The Riffel and Mürren led the way. Such hotels now exist by dozens, and more are built every year. Round Zermatt there are smaller or larger inns, about 3000 feet higher than the village, in many directions. But to live in one of these high hotels is yet to live the normal life of hotel-frequenting man. The scenery is changed, but not the human medium. It is the inevitable consequence of Alpine vulgarisation which drives the true lover of nature and of the freedom of simple life further afield.

To know what the high pastures are really like,

what kind of a foreground they naturally provide for an outlook on the world of mountains, you must not go to the modern Triftalp inn or the Schwarz See, but rather to such unspoiled places as the alps of Veglia or of By, both glorious expanses of wide pasturage, which no crowd as yet has attempted to invade, or is likely to attempt, thanks to their situations, remote from the great tripping highways. There you may obtain simple accommodation for a few fine days, and wander as you please over the undulating meadows, with no sound to break the stillness save the rustling of the breeze, the laughter of the waters, and the musical clang of cow-bells more or less remote.

It would be easy to divide the alps into many classes and to discourse of their characters from many points of view, but there are two main kinds of high pastures, differentiated from one another by their situations, which will naturally occur to every lover of mountains. One kind covers the floor and lower slopes of some high-planted valley ; the other lies on some open shelf or convex curving mountain-knee. The first sort is recondite : the other displays itself to the world and commands extensive views. The impression they produce is

EVENING IN ZERMATT

The promenade after dinner—a scene more reminiscent of Earl's Court than the "heart of the Alpine world."



very different. One is wild and gloomy ; the other gay and brilliant. One has to be sought; the other summons you from afar.

The high grassy valleys are not so common as the knees, nor do I at this moment recall one of them that is likely to be known by the general run of my readers, though there are plenty scattered about in all sorts of corners of the Alpine range. Perhaps the Täsch alp will do for type, though compared with many it is relatively open and accessible. There are better examples near the Dent du Midi, which may be more widely known than I imagine. The ascent to such an alp may lie straight up the valley, first through the forest, afterwards through glades and grassy openings, often of singular loveliness. At last you come to the stunted and scattered outliers of the forest, pathetic trees all crooked and misformed, bending away from the habitual wind and stretching forth angular arms after it as it hurries by. When these are left behind, the open grass-land spreads before and around you, seamed with radiating paths, that start away as with a most definite intention, but soon divide and subdivide, leading in fact nowhither.

If it is early in the season and you are ahead

of the cattle, the grass may be relatively tall and the flowers countless in number and variety. You will wade not ankle- but knee-deep in them, and the air will be filled with delicious perfume. Then indeed it is good to wander at this level. It is essentially the level for wandering. You may go as well in one direction as another. The views are in every direction and from every place. There are no points to ascend, no goals to reach. Now it is a fold of the ground, some little hollow with a pool, that attracts the eye; now it is an outcrop of rock; now some gap ahead filled by a snow-peak; now some downward vista of forest or valley. Anywhere you may find entertainment. Anywhere you may be tempted to sit down and gaze around.

The higher you go the shorter becomes the grass, but it is all the more succulent. As the season advances the flowers fade. But the alp nevertheless retains its charm. The kind of alp now specially under consideration, the hollow sequestered high pasture, is often round some corner, cut off from distant and especially from downward views. Perhaps a portion of a snowy peak can be seen over a shoulder of the surrounding foreground. Oftenest even the snows are

BERN FROM THE NORTH-WEST

Spire of Cathedral against the dimly seen mountains
of the Bernese Oberland



shut out, and the vision is limited by enclosing slopes or walls of shattered rock, where snow lies late in chinks and crannies. Such places have a wild and at first sight a forbidding aspect. But we grow to appreciate them and find delight in them as the novelty wears off. They have the dignity, the solemnity of solitude. Such elements of beauty as they possess are simple. They do not overwhelm the imagination by imposing shapes, nor astonish and puzzle it by complexities of colouring. Such places are best seen in dull weather when distant views are not to be had, and the eye has to take its pleasure in gazing upon what is near at hand. Then the brown rocks emerging from the grass and embroidered with lichens have their chance. In some places, where water habitually trickles over them, they are quite black and glossy. After all, there is variety enough of colour to be found about them, if one takes the trouble to look. Moreover, how much entertainment is to be found in the really intricate modelling of the grass-covered surfaces. Far different are they from mere low level fields which long ploughing has invested with a continuous curvature like that of a *névé* basin. The grassy alps possess a complex

accidentation of form. They bend and curve with an exhaustless variety. They burst, as it were like a breaking wave, against the rocks that perforate the grass. How many shelves and islands grass covers among the rocks! What picturesque corners it makes! What sheltered nooks! What attractive camping grounds! What charming sites for picnics, aloof from the ways of the crowd! In these remote and solitary places it is charming to while away the hours of an idle day, seeing nothing that has name or fame, following no track, accomplishing no expedition, no walk even that can be identified, yet finding everywhere something to look at, some entertainment for the disencumbered mind.

It is, however, the high and open alps, lying on the slopes or laps of the great hills, that are the favourite places with visitors of all sorts. Here the variety is so great, the opportunities of enjoyment are so many, the possible beauties so multitudinous, that it is almost impossible to indicate them in a brief space. Who that has climbed much, or merely wandered much, through Alpine regions has not an exhaustless store of memories of these open, far-commanding alps? What a variety of reminiscences arise when the

LOOKING DOWN THE VAL FORMAZZA
FROM TOSA



thoughts are turned towards this belt of the mountains! It forms a stage in the ascent and again in the descent of every peak and pass; and it is the special arena for the "off-day."

My own keenest enjoyments of the open alps are associated with two examples, not, I fear, very widely known—the Fontanella alp above Valtournanche, and the alp over which one descends from Rutor towards La Thuille. Both may be described as staged or terraced alps. They lie on a series of shelves, separated from one another by walls or steep descents. For aught I know, they may be dull to ascend; but to descend they are of marvellous beauty. This beauty is greatly enhanced by the waters that fall in cascades from step to step, and lie in pools, or race along over the successive flats. The waters and the meadows form foreground to the loveliest distances. There are undulations and slopes of green in front; green slopes to right and left; and then the sight leaps across a blue valley to the opposite woods and upper hillsides crowned with rocky crests, above which other ridges rise and peaks appear, till far away soars some snowy giant into the serene sky. In the descent we must turn this way and that—now facing a waterfall, now going down

some recondite gully, now down some outward-looking slope. And always, presently, comes the flat meadow on a lower shelf, and the call to tarry upon it and look back at the waterfall, or sit beside the torrent, or watch the reflections in a quiet pool. There are several examples of these lovely staged alps in Ticino, as you go down from the Basodino towards Bignasco. Wherever you find them they are fascinating. They always seem greener on the flats than any other alp. Their picturesqueness has in it an element of the scenic. The arrangement seems to have been made for effect.

There is another kind of far-commanding open alp, that all mountaineers must often have enjoyed. It is a long, relatively narrow slope or level of high pasture that lies horizontally between two cliffs or rocky belts. Such an alp lies above Zermatt to the south-westward, along the foot of the Unter Gabelhorn, round which it curves, so that as you walk along it your direction gradually changes from about south to west. It begins high up on the flank of the Zermatt valley, and it is carried round into the valley of Z'mutt, always at the same high level. There is no lovelier walk in that fine neighbourhood than this; for the fore-

IN THE VAL BAVONA

River Bed filled by avalanche. Basodino in the distance.



ground is always a slope dropping away to an invisible cliff at your feet, so that the eye constantly enjoys a delightful visual leap across the neighbouring valley to the great pyramid of the Matterhorn, or the more distant snowy range that ends in Monte Rosa.

The extent and development of the alpine belt vary greatly, not merely in different regions, but in different parts of the same region. On descending some mountains, rocky débris are found to cover a large area of undulating ground, and then the grass slopes plunge steeply to the forest, and are quickly traversed. On others the grass reaches high and undulates slowly down, so that you may be walking over it for hours before you reach the trees. These lazily sloping alps are most charming when rightly used and approached, though to the climber, eager to gain the snowy heights, their extent may seem tedious, especially when they have to be traversed in the dark.

There are some magnificent alps along the north side of the Rhone valley above Sierre. The slopes that support them rise rapidly from the valley with an equal and continuous slant. When those are surmounted there comes a great area of undulating land which begins amongst the trees but soon

opens out to the sky and stretches far back towards Wildhorn, Wildstrubel, and the rest. On these great alps there lie many small lakes, and all the alpine region hereabouts is very diversified, and filled with foregrounds of all characters and kinds of picturesqueness—and then what distant views they have to set off, for across the Rhone valley to the southward is all the splendour and extent of the Pennine range, with Mischabel or Weisshorn standing out in front in overpowering magnificence.

Perhaps we shall be held justified in claiming that the views from the region of the high pastures are their chief charm, rather than the nearer views upon them. Certain it is that most of the great peaks are best seen from the alpine level, and that the favourite views of them, the characteristically memorable and popularly best remembered views, are from alps. Such is the view of Mont Blanc from the Flégère, of the Matterhorn from the Riffel alp, of the Weisshorn from the Täsch alp, of the Mischabelhörner from above Saas-Fée. The spectator stands high enough and not too high; he can be near enough at this level and yet not too near. The mountain still retains its individuality,

its existence separate from its neighbours, and yet can be seen as a whole. A little nearer and it begins to disclose the details of its structure, whilst its mass fills a larger area than can be embraced at a glance. A little further away and the mountain is only beheld as one of several, part of a larger mass, a component element of another effect.

From the alpine level you look down as well as up. The depth beneath and the height above may be, or appear to be, approximately equal. Moreover, the distance to which the sight penetrates, the area over which it ranges, bears some moderate proportion to the size of the mountain-masses included in it. In the view from a high peak, visible distances are so great, the area embraced is so vast, the peaks visible appear to be so countless, that each of them may shrink into individual insignificance. It is the multitude of peaks rather than the mass of any, their abundance rather than the form of any, that causes the overwhelming impression upon the spectator. But in views from the alpine level there is a greater simplicity and a no less effective moderation. The mountains in sight are few, and of them one is sure to

be most prominently placed, one will be central if not unique; and that mountain, in the typical view from an alp, will be seen from base to summit, not merely its superstructure of rock and snow, but its wide foundation also, reaching down into the depths of the valley and spreading broadly with all needful amplitude.

It is not thus that mountains are beheld from the valleys. As you traverse the whole Vispthal from Visp to Zermatt, you do indeed behold the summits of most of the great flanking peaks from successive points on the valley floor, yet it is only the expert who can recognise them, or tell which white fragment far aloft is the top of a great mountain and which are the mere shoulders of lower buttressing ridges. The knees of the hills hide their breasts and generally also their hoary heads from the view of one who passes along at their feet. If you would behold a great mountain as a whole, it is from the knees or the grassy lap of some other that you must look. Foreshortened foundations are then withdrawn; each component part of the whole vast structure takes its proper place and is seen to fulfil its own function. Buttresses stand for-

IN THE VAL D'AOSTA

The Mont Blanc group of mountains hidden in clouds.



ward and widen out below; high valleys can be traced into the heart of the mass; minor peaks are duly subordinated. The mountain, in fact, can be seen as a whole. It is thus you behold the Mischabel from the alp at the base of the Weisshorn or the Fletschhorn; thus the Matterhorn from the Riffelalp; thus the Jungfrau from Mürren. A true instinct has selected and made such points of view famous.

We have left ourselves little space to discuss the value of the high pastures as an element in the mountain landscape, parts of the scene to be looked at, not positions to gaze from. That their value in this respect also is very great must be obvious enough, for in most mountain views the grassy belt fills the largest part. Of course it is not the most impressive. We look at the mountains, or at some mountain, some glacier, waterfall, or cliff, and make it the centre of our observation. As a rule, however, except when we stand in the midst of the snowy world, the mountain that is centrally gazed at does not occupy so large a part of the field of view as is filled by the grassy expanse at its foot. The grassy alp, in fact, generally bears to a mountain the relation that the background does to a Madonna in a picture. Or we may say that alp

and sky are the fabric on which the mountain is embroidered.

In many parts of the world the grassy belt is absent from the ranges, and its loss is greatly felt. Peaks rising out of slopes of débris and sand have a grandeur of their own, but it is not the normal grandeur of the Alps. In some other ranges the tree-level leads at once to rocks and snow. It is the merit of the Alps that a broad belt of delicately modelled grass-land almost invariably intervenes between forest and snow. This grassy belt covers the wide substructure of the peaks. Above it is the realm of frost, of split rock and jagged forms. But as soon as the grass-level is reached suave outlines and rounded surfaces, broadening as they descend, take the place of the accidented forms above. The value of the contrast will be apparent to all. Small and very correct little models of the Matterhorn in bronze are sold for letter-weights, in which the culminating pyramid alone is given, planted on a rectangular stone plinth. They are interesting mementoes. But compare one of them with a view of the mountain as seen from the Riffelalp, rising above the long bulging grass-covered slopes that descend almost to Zermatt, and you will at once realise how important an element

in the general impressiveness of the mountain are those lower slopes, and that not merely for their form but for their rich coloration.

The green of the alps is the true key-note of Swiss colour. To it all the rest are subordinate. By contrast with it, rather than with the remote transparence of the air-submerged rocks, the snows manifest their whiteness and the sky its blue. From season to season of the year it changes its tint, between the shrill green of opening spring and the amber of autumn. It changes likewise from hour to hour beneath the varied slanting of the sunshine. How velvet-dark seems the alpine belt at night when the moon is high! Even in the twilight you cannot tell that these slopes are grass-covered, till

"Under the opening eye-lids of the morn"

"the high lawns appear." At first the sunshine lies upon them in patches, like carpets of gold on a rich green floor. The sunlit area increases as the gold itself changes into green, whilst the dominant note of colour rises in the scale. Long before mid-day the broad belt attains its unity of effect, and divides the dark forests and deep valleys from the radiant heights. Most of us, who delight

in mountain scenery, praise this peak or that, this broken glacier, wide-spreading snow-field, or intricacy of splintered ridges, forgetting that it is often the unobtrusive, tenderly modelled alps below, that endow these high eminences with half their charm. The beauty of a scene depends upon the harmony of all its parts. It is well sometimes to fix attention on those that seldom insist upon it for themselves.

NOTE TO PAGE 229.—Mr. Coolidge informs me that the Mutten-alp belongs, not to the Thierfehd, but to Brigels in the Grisons, and is reached over the Kisten Pass. That is why the path down to the Linththal is so bad.

CHAPTER XI

THE HUMAN INTEREST

It has often occurred to me, when travelling over glaciers and among mountains, seldom or never before visited by men, how much the impression they produce upon a first spectator loses by lacking the human interest. Of course some stray huntsman or dumb and forgotten native may have been there before, but if the fact is unknown to us, it is as though he had not existed.

When climbing Illimani, the great Bolivian mountain, the human interest accompanied us up the lower slopes. Here were old fields, old irrigation channels, even ancient ruined huts. Higher up we still had the memory of former adventurers to keep our hearts warm; but when we had forced the great rock-cliff that guards the peak, and were upon the upper snow-field,

we were, so far as we knew, in an unvisited world. There did indeed exist an ancient tradition that once, long long ago, an Aymara Indian had gone aloft, seeking the abode of the gods, and that having found it, he was taken by the gods to themselves and never returned to his people; but the tale was too slender a thread to form a sensible connection between us and the world of bygone humanity. The climb took us over one high peak, then across a great snow-field and up the highest peak. We revisited and rested on the lower peak in the descent. While there resting, I dropped my hand on the rock beside me, and snatched it away, feeling something soft and clammy, a kind of texture instinctively perceived to be strange at such a place.

Looking to see what the substance was, I found it to be a fragment of goat-hair rope, such as the Indians of the Bolivian plateau have used from time immemorial. Instantly the old legend was recalled to my remembrance. It was true! The Indian had actually been here where I was sitting. Here he rested. Hence he looked abroad over the country of his birth—probably his last long look on any view in this world; for he never returned, and must presently have

lost his life in some hidden crevasse. The thought of that nameless one animated the scene, and enriched the emotions we experienced with a new interest. I thought now of how he had felt with this great prospect spread abroad before him. I wondered whether his gods had appeared to him, whether he had beheld visions and dreamed dreams, and what those visions were like. There beneath him he had perhaps gazed for the last time on his birthplace, and identified the little hut that was his home. Did he know that he would never return? Did he think about his friends so far below and wonder whether they were looking up towards him? Did he promise himself great future fame in his tribe? Did he dream that they would identify him with the very gods? For the remainder of our resting-time the whole view was animated by thoughts of this man. It is the best instance I can cite of the value of a human interest in giving sentiment to a mountain scene.

The same lesson was taught me by the Spitsbergen mountains, amongst which I spent two long summer seasons. The coast of Spitsbergen is rich with the tales and traditions of human achievement and suffering. Few places

have been the scene of tragedies so numerous and so long drawn out. In few have more dramatic adventures occurred and more varied enterprises been undertaken. But the interior of Spitsbergen, and especially its mountain ranges, had scarcely been penetrated before. The mountains beyond reach of the shore were unclimbed, with one exception. The landscapes were unknown to man. It was necessary to spend some time in these solitary places to realise how much they lost by this aloofness. No peak possessed name or history. None had ever been the centre of any one's landscape. None had measured mid-day for any toiler, or served as reckoning point for the close of his labour. No villagers had ever imagined those Arctic glaciers as the home of any gods or the paradise of any heroes. They had never found their way into ancient tale or legend. They had never been worshipped or sung by man, historic or pre-historic. They were just elemental lumps of the earth, with no more human sentiment attached to them than to any dozen stones you may gather off a heap and make mountains of in your imagination.

Pick up any fragment of rock you please and place it upon your table. Look closely at it

and persuade yourself that it is not six inches but 20,000 feet high. On that assumption search for routes up it. Examine its faces and its ridges, its cracks and its gullies. You will be able to climb about it in a day-dream, to have accidents upon it, to succeed or to fail in various ascents. But who will care to "hear tell" of your proceedings? And yet, apart from geographical and geological considerations, which are in fact historical, any casual mountain is no more interesting in its essence than your stone. There are hundreds of thousands of mountains in the world. What intrinsic interest has one of them more than another, from a climber's point of view, except in two respects, the difficulty of the climb and the human interest? But the difficulty is of no account, for if that is what you want you can find it on Scafell, and need not wander to seek it.

No! it is above all the human interest that ennobles a peak and makes the ascent of it desirable. It is to climb an elevation that men have seen; to climb a peak that has been named, that has been looked at for centuries by the inhabitants at its base, that travellers have passed by and observed, that has a place in the knowledge and memory of men. If there

were a great mountain in full view of London or Rome, how much more interesting it would be to climb than some nameless lump in Central Asia, like K2, that was never within view of any abode of men.

This was one of the main attractions of the unclimbed Alps to early explorers of the high levels. Mont Blanc was known of old. How many generations of men had looked from Thun at the Oberland giants and told stories about them. How much the famed devils and dragons added to the fascination of the Matterhorn. The Alps had looked down upon the march of armies and the flux of peoples for uncounted thousands of years. Their solitudes were peopled by the dreams of all the generations that had passed by them or dwelt amongst them. The subliminal consciousness that this was so, counted for much in the strong attraction that drew the pioneers aloft.

The pioneers in their turn have richly endowed the Alps with a further human interest. Why do so many people want to climb the Matterhorn? It is not a better climb than the Dent Blanche. The reason is because of the stronger human interest that the Matterhorn evokes. All who have any knowledge of Alpine history have read the story of

the long siege, the triumphant conquest, and the dramatic tragedies of which the Matterhorn has been the scene. It is the fascination of those memories that draws men to the peak, and makes the climbing of it seem so desirable an adventure to so many people.

Thus also is it, more or less, all over the Alps. Each peak now has its story. Each ascent has been made before and described. Wherever we go now we find and recognise the traces of our predecessors. Here is an old tent-platform; we know who built it and when. This is the site of such an accident; that crag turned back such a party on such an occasion. The memory of bygone climbers is everywhere. It peoples the solitudes and humanises the waste places. These memories will grow mellower as they deepen into the past. The best stories will become classical, and the scenes of them will be endowed with a prestige far beyond any that now attaches to them.

A very dull person looks interesting when beheld down a vista of several centuries. The memory of the first climbers of the great Alpine peaks will remain among the mountains to a far-distant future. I daresay my Illimani Indian was a crack-brained semi-civilised person,

but I would sooner see him than a living Cabinet Minister. I can never think about his peak without recalling him. So is it with the bays of Spitsbergen. The whale-fishers were no doubt a coarse lot of quarrelsome seamen, who stank of blubber most disgustingly; and yet if I could call Mr. William Heley from his grave, and hear how he emptied out the Dutchmen on one occasion and they emptied him out on another; if I could get him to show me his huts where they stood, and could hear him yarn about the fishery, how entertaining that would be, and how gladly would I exchange the morning newspaper for such talk. We cannot in fact recall these men, but in fancy we can and do. It is because we possess and exercise this power of fancy that the mountains, which have been in past times the scene of human activity and life, are so much more interesting to wander amongst, except from a purely scientific and adventurous point of view, than those which have not.

What is true of bygone individuals is no less true of bygone peoples. Valleys that have been long inhabited and the high pastures that have been frequented of old are far more pleasant

to visit than valleys that have scarcely beheld the face of man. We were made conscious of this difference in the Mustagh mountains of high Kashmir. There the secluded fastness of Hunza-Nagar is the home of an ancient civilisation. The gently sloping floor of the valley is divided into terraced fields, supported by cyclopean walls that might be as old as Mycenæ itself. The villages are built upon their own ruins, who can say to how great a foundation depth? The paths are worn deeply into the ground. The Raja's castle, dominating his little capital, has a venerable aspect, and if not actually old, incorporates an ancient type. There are little ruins by the roadside and carvings upon the rocks. Wherever you look, the marks of long frequentation are to be traced. Moreover, the people themselves bear the imprint of surrounding nature upon them. Their action in movement, their way of life, their adaptation to their environment—all imply old habit and deep-rooted tradition. The valley in which they are enclosed is the world to them. Its every feature has entered into their habits of thought. The surrounding mountains are a part of their existence, and borrow from man in turn a reflected glow of traditional interest.

From this man-impregnated valley we presently passed over the mountains to the valley of Braldu, descending upon the highest village. Above that poverty-stricken place the traces of man were few. There were faintly marked tracks; there were even a few small ruined huts; but all that these indicated was the occasional passage of hunters or the brief visits of shepherds or gold-washers. Once the glacier was reached, the last of these traces was left behind. It was impossible not to feel the contrast between this region and peopled Hunza. The scenery was not less, was even more stupendous, but the human interest was lacking. There were few named spots, and hardly a remembered tradition. The scenery to the natives with us was not the home of their fathers, but the elemental earth. It might have been fetched from the other side of the moon, for all they had to tell about it. Two recorded parties had preceded us for a certain distance up this valley, and their ghosts alone peopled the solitude, but not a trace had they left upon the surface of the ground discoverable by us. If we had found even the remnants of one of their encampments, it would have animated the surroundings with the memory of

CHÂTILLON, VAL D'AOSTA



man; but we saw none. The lack was a vacuum, an intellectual hunger, continuously felt.

Few mountain regions in the world, outside of the Arctic and Antarctic solitudes, are thus denuded of human interest. The mountains of the Old World and the New have been inhabited over a large part of their valley-area; but often the inhabitants have been people about whom little is known. It is one of the great charms of the Alps that they have long been the home of a fine group of peoples. "Your country," I once remarked to a citizen of a South American Republic, "ought to be the Switzerland of South America." "I will make it so," he replied, "if you will fill it for me with the Swiss."

Throughout the large Alpine area various races have dwelt and dwell at the present time. The character of the population changes from valley to valley, and there is no small variety, not merely in dialects, but even in languages. There is a similar variety in habits, in domestic architecture, in costume, and in bearing. Much of these differences in the character of the inhabitants we are wont to impute in our thoughts to the mountain districts themselves. When we talk of the charms of the Italian Alps, are we not thinking of the attractive-

ness of the people, and the picturesqueness of their abodes and places of worship, as much as of the luxuriance of the valleys, the sparkling of the waters, and the mere beauty of the hills? The spirit of the people seems to infuse itself into our memory of the mountains about them, as much as the character of the mountains has affected the nature and disposition of the people. Which, I wonder, borrows most from the other—the Lake of Lucerne from the old Tell legend, or the legends from the landscape of the lake?

An essential part of the human interest in the Alps grows out of the length of time through which history has concerned herself with them. The history of the Alpine valleys has only been written, or begun to be written, in recent years. Early visitors to Zermatt no doubt were conscious of the deep impress made by man upon the valley landscape, but they could not interpret, as we now can, the meaning of much that they saw. But when the local archives were searched and the traditions written down, when it was realised that the life now being lived by the peasantry was in all essentials the same life that had been lived by their ancestors for hundreds of years, ancestors bearing the same names and owning the same

A CORNER OF THE TOWN OF ALTDORF

The traditional scene of William Tell's exploits. Here Gessler ruled and the shooting of the apple took place. A place of patriotic pilgrimage of the youthful Swiss.



properties that are still borne and owned by their living descendants, what an increase of interest that gave to a place.

The old tales about the village deep in Tiefenmatten, about the pilgrimage that used to cross the Col d'Hérens, about the frequented routes over Theodul and Weissthor—does it not add a new charm to the places themselves to hear them told? Who is not interested to remember, when standing on the Theodul pass, that Roman coins have been found there? Climbers have taken fully as much interest in the question of where the Old Weissthor route lay as in actually climbing the passes. I well remember the keen delight that came to me when I discovered that a pass I had crossed, as I supposed for the first time, between the Fillarkuppe and the Jägerhorn, was in fact the real Old Weissthor itself, a well-known mountain-route centuries ago. To rediscover an old track like that is far more delightful than to invent and carry through some entirely new expedition.

Correspondingly with the future as with the past—to make an expedition for the first time that others will often repeat is a lasting source of pleasure; but to make one that no sane person ever repeats or is likely to repeat is poor fun. I

have had many opportunities of making new expeditions in the Alps and elsewhere, and have availed myself of a few; but none ever gave me the continuing satisfaction that I derive from the Wellenkuppe near Zermatt, a mountain that I invented, climbed, and baptized, and that immediately became and has since remained a most popular scramble.[1]

Some part of the popularity of the ascent of Mont Blanc from Chamonix is due to the fact that the mountain is the highest in the Alps; part is due to the fascinating beauty of the ice and snow scenery passed through; but far the greatest attraction is the long and interesting history of the climb. No one, I suppose, ascends Mont Blanc without a thought of Balmat and De Saussure, and at least some dim consciousness of the number of early climbers who mounted by the way he takes, and felt all the strange emotions and high excitements they so naively recorded. What would the Tödi be if robbed of the memory of Placidus à Spescha? Even a Mont Ventoux can attain dignity and importance by association with so great a man as Petrarch.

[1] Its summit had previously been touched by some unrecorded route by Lord Francis Douglas, in an attempt to climb the Gabelhorn; but for twenty years no one had thought of the peak, which had no name.

It is, however, to the passes rather than to the peaks of the Alps that history clings. Allusion has been made to the Weissthor and the Theodul, and many other minor passes similarly recorded might be mentioned; but it is the great passes, the deep depressions in the main range, that are chiefly memorable from the historical standpoint. Modern climbers unwisely neglect these great routes, or confine themselves to such as are tunnelled. John Ball and his contemporaries made a point of knowing as many main passes as they could. It was their pride to be able to say, not that they had climbed so many peaks, but that they had traversed the Alpine chain by so many great passes. Old literature is therefore fuller of accounts of the historic passes than are most present-day volumes, which regard them as a subject outworn.

To mention the historic passes is to call up the name of Hannibal. Here is no place to revive that old discussion as to the situation of Hannibal's pass. Historians have not yet entirely convinced one another on the matter. But if a general certainty had been arrived at, if we could feel perfectly sure that Hannibal and his host had actually trod a particular route, it cannot be denied

that that route would be well worth following, book in hand, for its historic interest alone.

Some, perhaps many, of my readers will have traversed the Great St. Bernard, the Summus Penninus of antiquity. Few who have done so will have been oblivious, as they went, of the many great men in whose steps they were treading. Celts, Romans, Saracens, mediæval warriors, statesmen, saints, bishops, and monks streamed in their day across this col. Here passed Charles the Great and other Holy Roman Emperors, Lanfranc too, and the saintly Anselm in all the fervour of his young enthusiasm. The reader will forgive me for quoting once again Bishop Stubbs' translation of the letter of a Canterbury monk describing his passage of the pass in February 1188 :—

"Pardon me for not writing. I have been on the Mount of Jove; on the one hand looking up to the heavens of the mountains, on the other shuddering at the hell of the valleys, feeling myself so much nearer heaven that I was more sure that my prayer would be heard. 'Lord,' I said, 'restore me to my brethren, that I may tell them, that they come not into this place of torment.' Place of torment indeed, where the marble pavement of the stony ground is ice alone, and you cannot set your

PONTE BROLLA

Over the Maggia, near its junction with the Melezza,
looking up the Val Centavalli.



foot safely; where, strange to say, although it is so slippery that you cannot stand, the death (into which there is every facility for a fall) is certain death. I put my hand in my scrip, that I might scratch out a syllable or two to your sincerity—lo, I found my ink-bottle filled with a dry mass of ice; my fingers too refused to write; my beard was stiff with frost, and my breath congealed into a long icicle. I could not write the news I wished."

Mr. Coolidge, in that store of Alpine learning, his book entitled *Swiss Travel and Swiss Guide-Books*, reminds us that the first known guide-book was written for the crowd of pilgrims crossing this same pass, by no less unlikely a person than the Abbot of Thingör in Iceland, about 1154. There was a building on the pass before the year 812. A century later the Little St. Bernard was similarly provided. The Simplon was thus equipped before 1235, the St. Gotthard before 1331, and the Grimsel before 1479. Modern Swiss travellers may not be aware of these facts in detail, but it is impossible for any intelligent man to frequent the Alps and not become conscious of the antiquity of the relation between man and the mountains.

Sometimes traces of visibly ancient ways are

encountered, as on the Albrun pass, for instance, or the Monte Moro. The sight of such a fragment of old paved way instantly carries the mind back into the past, and animates the route as with a ghostly procession. Thus, too, I found it in Bolivia and Chile, where remnants of the old paved Inca road, that traversed a large part of the continent from north to south, are often to be met with. The sentimental value of such relics is incalculable. They, as it were, hypnotise the mind and induce a mood in which we see the nature that surrounds us in a new way. They remove from the traveller the sense of isolation, and form a link between him and the countless generations that have gone before. He shares with them the toil of the way, and looks abroad on the scenes that they beheld.

Still more interesting and rich in a historic sense are the Brenner and other passes over the Eastern Alps, which are known to have been important trade-routes in the age of bronze. Over them successive immigrant waves of humanity poured into Italy. Over them at a later date passed emperors with their armies. No route bears the evidence of its rich historical associations more visibly than the Brenner. An aura of antiquity

IN THE VAL D'AOSTA



rests upon its villages. Its many castles, its ancient churches, its noble village streets, its countless monuments, all tell the same tale. I never can cross the Brenner without having Albrecht Dürer by my side, who four times made the transit, sketch-book in hand, and whose careful and beautiful drawings of some of the views still exist in perfect preservation.

The presence of man, not as a traveller through the Alps, but as a long-settled resident there, deriving his subsistence from the soil, is an important scenic factor in yet another respect. The difference in aspect between a well-peopled mountain region and one sparsely or not at all inhabited is more striking to the eye than the inexperienced might be prepared to expect. The amount of landscape modelling that one man can effect in a lifetime is small, but a community of men, working generation after generation for many centuries, can effect much.

The trained eye can perceive the effect almost everywhere in the Alps; the untrained must learn to look for it. Take, for example, such a well-known large grassy area as the slope descending from the Matterhorn to the Zermatt valley, between the Gorner glacier on one side and the

Zmutt glacier on the other. If man had not laboured for centuries on that slope, it would be ragged with fallen and protruding stones. The grass upon it would be rough and uneven, or entirely replaced by stunted rhododendron, juniper, or the like bushes. Now it is all smoothed and tended. The loose stones are gathered into walls, bordering the mule-paths or supporting the lower edges of the fields. Earth has been carried on to bare patches. Little hay-huts and other farm-buildings are planted about on suitably protected places. The grass is mown to a velvety fineness of texture. Irrigation channels are led in all suitable directions, and the glacier dust deposited along their beds has raised long grassy mounds, which in process of time have sometimes grown to a height of two or three feet. More important still, in smoothing off asperities and giving a rounded curvature to the general surface, is the continual deposit of the same dust which this artificially distributed glacier-water lays down all over the meadows. There results a suavity of outline, a delicacy of modelling, and a fine quality of grassy surface, which change the aspect of the whole slope, even when beheld from a great distance, so that it would be impossible to mistake

IN THE WOODS OF CHAMONIX



it for a slope correspondingly situated in any uninhabited or uncultivated mountain region in the world.

What is true of the middle pastures is likewise true of the forests. Virgin hill-forests, such as one may see in the southern part of the Argentine or Chile, are very different in appearance from an Alpine wood, whether seen from far or near. Man, as we know only too well, has not treated mountain-forests wisely, and he is suffering the consequence to-day. But apart from cases of forest removal and the consequent changes of scenery thereby caused, the alteration in appearance produced by good forest management is very noticeable. Alpine woods have a gardened aspect. The mere sight of them is eloquent of the presence and activity of man, who here also has left unmistakable traces of his activity drawn broadly over every Alpine landscape.

In the regulation of streams and rivers, again, the hand of man makes its long, slowly acting presence felt in the Alps. Gaze from the Riffelhorn down the St. Niklausthal, and notice how mainly of human determination are all the minor forms of the valley-floor. It is easy to compare with a photograph of that well-known view one, say, of

the Bush Valley in British Columbia, which has been revealed to us by the explorations of Professor Norman Collie and his friends. Such a comparison manifests, as no words can, the great effect upon valley scenery on a large scale produced by the activity of man.

It is only high aloft, close to and all above the snow-line, that man's energies have not availed to change the landscape. He has built a few huts there, but they are insignificant. He cannot turn a glacier from its course, nor can he dam it back in the event of its pleasing to advance. The great cliffs and débris slopes, the reservoirs of snow, the rivers of ice—these giant phenomena of the heights are beyond his governance, even if any material advantage tempted him to try meddling with them. The most he can do is to blast some small tunnel in ice or rock to control the outflow of a gathering of water, that might otherwise discharge itself with violence and work destruction far below.

It is the great good fortune of the Alps, beyond all other snowy ranges, to possess both the region of utterly untamed nature above, and a larger area of humanly modified land below. A normal Alpine view includes parts of both regions. Looking up from beneath, you have the gardened world for

IN A GARDEN AT LOCARNO

Last gleam of the sunset on the hills above Lago Maggiore.



foreground and the wild world for distance. Looking down from above the reverse is the case. The contrast is always charming. What more beautiful setting for a snow mountain can be conceived than that which surrounds the Jungfrau as beheld from near Interlaken? How pleasant it is, when resting at some fine noontide hour on the summit of a lofty peak, to look abroad over the peopled Italian plain, or down into some deep valley, dotted with farms and villages, with here and there a white church standing in the midst of châlets. It is only the works of modern man, his huge caravanserais, his railway stations, and his accurately engineered roads, that are wholly hateful —blots on the landscape defiling and degrading it. Let us hope that these hideous intruders are not destined to a long existence. It is not likely, much though we may desire it, that in our time the tide of touristdom will abandon the Alps. It has come to stay. It will increase rather than diminish. But with the advance of civilisation perhaps its manners and tastes will improve, and it may, at some far distant time, come to demand a kind of housing that will not utterly destroy the very beauty which it blindly travels to seek.

CHAPTER XII

VOLCANOES

To the purely Alpine traveller, Volcanoes are not a matter of interest, because there does not exist a single volcano in the Alps, nor, so far as I am aware, even the ruins of one. Volcanic rocks there may be, but we are not concerned with rocks except in so far as mountains are built out of them. To the mountain-lover, however, in the broad sense —and it is for such I am writing—volcanoes are as interesting as any other definite type of peak, and I therefore propose to devote this chapter to a consideration of them from the picturesque and climbing point of view. For the European traveller there are volcanoes enough, both active and extinct, and that without going to Iceland. Most people have seen Vesuvius. Etna and Stromboli are frequently passed, and the former is not unfrequently climbed. Auvergne is a good place for a holiday.

If ordinary tourists knew how well the volcanic Eifel repay a visit, they would oftener turn aside to them. Teneriffe is on the list of mountains most people hope some day to see. In my own mind, when volcanoes are mentioned, there always rises first the reminiscence of the great mountains in South Bolivia and Northern Chile, with their stately grandeur of scale and grace of outline.

Every one who has climbed Vesuvius has some idea of the nature of volcano climbing. It is by no means the best sort, and the Alps as a play-ground are none the worse for lacking it. From a climber's rather than a petrologist's point of view, volcanic rocks are liable to seem both very hard and very brittle. They fracture with an astonishingly sharp edge, which cuts, like a knife, the fingers and clothes of the climber. Notwithstanding their apparent hardness, which seems to promise for them an unusual durability, they crack up with great rapidity under the action of frost or of blows, and rapidly subdivide into small angular debris. The smoothness of the fractured surfaces, when fresh, reduces the friction between the fragments much below that normal to the debris of ordinary rocks, so that slopes of volcanic debris are very unstable. The foot sinks into them, almost as into

sand, and they cut the boots and gaiters to pieces. To run down such a slope is pleasant enough, but to wade up it is the worst kind of purgatory, provocative too of more sins of language than it can possibly purge in the time.

The novice at volcano-climbing approaches his mountain with a light heart. However big it may be, it looks easy, and he promises himself a rapid ascent. The lower slopes of volcanoes are frequently most fertile, so that the first stages of the ascent may be along umbrageous paths or through vineyards and olive gardens. Ultimately the naked mountain has to be tackled, and then troubles begin, and they are the same all the world over. All that a volcano produces is toilsome for the foot of man. The slope continuously steepens. The disintegrated lava or the volcanic ash are alike disagreeable. The mountain is sure to be voted a fraud from the climber's point of view. Even Aconcagua, greatest of all volcanoes, is as rotten as the rest. There is hardly a firm crag on its mighty face.

It follows that volcanoes are peaks of an unstable character. They are upstarts by nature, and they are easily pulled down. Among mountains they are the most short-lived. In their decay they lack the dignity of a peak of crystalline rock, that

PILATUS AND LAKE OF LUCERNE FROM
THE SLOPES OF THE RIGI



fights against disintegration and resists to the last, holding forth to the sky its splintered crags like passionately protesting hands. There is no protest in a volcano. It yields willingly to decay. The debris of its upper rocks flow down its face almost like water. They grind together into dust and are blown away by the winds. The old moraines of Aconcagua ultimately turn into sand dunes.

Yet these mushroom monsters are not without their compensations. When active they enjoy a magnificence of public advertisement that no other kind of peak, even when it is the scene of a particularly ghastly accident, can ever hope to rival. They grow in height, or are blown to perdition, amidst earthquakes and terrific thunders. Lightnings flicker about them like the dartings of a serpent's tongue. The storm-clouds that envelop snowy peaks are nothing to the monstrous piles of smoke and darkness that wreathe the brows of an erupting volcano. Blasts of fire shoot from them, and for glaciers, their sides are flooded with molten lava. Few of us can hope to see such sights in the fulness of their glory.

When the mountain is full-grown, and its days of activity are done, for a while it reigns, a figure of perfect grace, a very queen for elegance and beauty

of form. Who that has ever seen Vesuvius can deny this fact. Probably no snowy peaks in the world are more absolutely perfect in form than the white-clad giant volcanoes of Kamchatka, or, on a smaller scale, the peerless Fuji of Japan. The outline of the cone, gently rising from the foot, and then steepening in its incomparable logarithmic curve, is the gracefullest that nature produces on a large scale. Even the effulgent domes of the greatest cumulous clouds that, on a faultless summer afternoon, soar into the clearest blue sky, are not to be compared with volcanoes at their best. These have the aspect of works of art, made, as it were, expressly to incorporate an idea of beauty. They possess the symmetry of a fine crystal, but at the same time, a grace far beyond what is possible to any crystalline form. And then, how they soar! How their beautiful heads seem almost to float in the blue! How symmetrically the mists gather about their summits! At one time the base will vanish in the bright opacity of the lower air, and the top will be seen in sharp distinctness, like a floating island in the sky. At another, the summit will fade away, and the shadowed base will fill the vision with its purple solidity. And always there hangs about a volcano

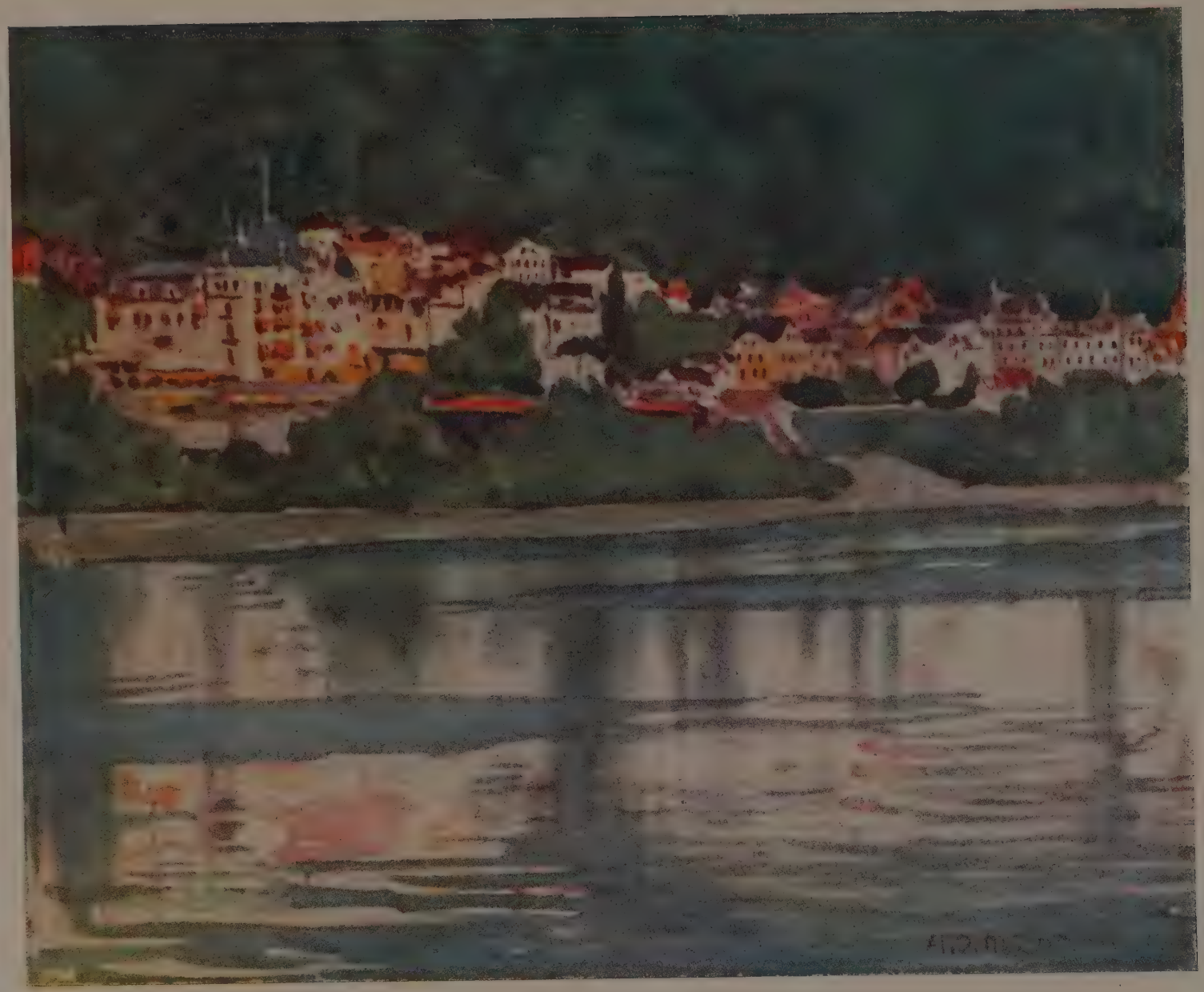
the memory of its fire-begetting, and the suspicion that all may not yet be over. It is, as it were, an inscribed finger-post, warning us of the molten core within. It is at once a memorial and a monition to those that dwell beneath it. It is the witness of past and the herald of future convulsions; yet, being such, it is itself in form the peacefullest and tenderest in nature. No woman's robe droops more delicately over her bosom than droops the once molten drapery of a volcano. Its aspect bears a double and opposed suggestiveness. Such are volcanoes in the day of their perfection, before the denuding forces have made inroads on the symmetry of their form.

Yet even then it is not well to approach them too closely, unless you would have the sense of their beauty supplanted by a different kind of emotion. The nearer you approach a snow-mountain, such as Mont Blanc, and the more intimately you penetrate its white recesses, and acquaint yourself with its details of crevasse and sérac, the more conscious are you of the perfection of its finish and the loveliness of its details. It is not so with a volcano at any time of its career. When it is newly fashioned and the lava streams are still in movement and smoking upon its sides,

and the cinders and ashes of its recent ejection are piled upon it, to approach them is to behold sights more provocative of horror than of admiration. They appal, they create astonishment, but they do not attract. Cast your eye over the remarkable series of photographs by Dr. Tempest Anderson, published under the title "Volcanic Studies," and you will have ample proof of this. Consider the Icelandic gorges, the outer crater of Teneriffe, or the views of recent volcanic energies displayed in St. Vincent—the mud-rivers, the sand-strewn valleys; here is enough to interest and more than enough to appal, but the kind of beauty associated with a distant view of a volcano is absent. There is no grace, no charm, none of the sweet feminine outline which makes volcanoes the queens and fair ladies among hills.

But when all the dramatic stage of their existence is over, and the fires are out and the earth around has ceased from quaking; when trees have gathered over the lava torrents and rich vegetation has covered up cinders and ash; when the sulphurous vents are become sapphire pools of clear water overshadowed by foliage, and all the ghastly details of tragedy are covered up by the splendid garments of tropical vegetation; then you

MONTREUX, LAKE OF GENEVA



may approach and ascend if you please, but it will not be as a climber, for the climber is one who seeks the naked places of the earth, and does not wander for choice in grassy dells and tree-embosomed shades.

He, however, who should converse about volcanoes and say no more than this, would leave a most false impression upon his hearers, for Nature always provides compensations for her sincere and humble lovers, and even in the barest volcano she has not failed. The very rapidity with which they yield to destructive forces leads to results not discoverable in stronger and more resolute peaks. Frost, winter, and snow breach their sides with exceeding facility. Torrents dig gullies into them. The very winds blow their substance away. Hence it comes that a volcano in active process of destruction often provides detailed scenery of astonishing grandeur and boldness. Its vertical-walled gullies, its cliffs, its castellated ridges are like none other. There is no aspect of durability about them, no signs of hoary antiquity, none of the dignity that belongs to archæan rocks. They are visibly in rapid decay, yet, for all that and even because of it, they are strangely imposing with a sort of rococo grandeur. If the Meije

and Ushba are Romanesque, if the Matterhorn, Masherbrum, and Siniolkum are Gothic, we may describe the world's shattered volcanoes as Flamboyant. They boast a greater and more unusual variety of forms, a multiplicity of details that bewilders. The spiry exuberance of Milan Cathedral can be paralleled in the neighbourhood of Aconcagua. Nowhere are buttresses more emphatic, points of rock in perilous precipitance of decay more plentiful, cliffs more abrupt, the skeleton of the mountains more nakedly displayed.

Yet better deserving of note is the brilliancy and variety of the colouring by which volcanic rocks are often characterised. The local colouring of Alpine rocks is seldom rich. The Dolomites indeed have a reputation for the richness of their tints, but it is mainly derived from the sunrise and sunset colouring which they reflect so brilliantly that it almost seems to proceed from them. The general effect of Alpine rocks is some variety of grey or brown, the tone of which is deepened by contrast with the snows. Except in volcanic districts, it is only in Spitsbergen, and at one or two spots in the Himalayas, that I have observed the local colouring of the rocks

to form a prominent factor in the beauty of a mountain view. There indeed the red and yellow sandstones display their rich tints with great effect, so that the colour, shining over the wide expanses of Arctic glacier and snow-field, becomes a main element, and reduces the forms of the peaks to a secondary consideration. Yet in Spitsbergen this only happens in a relatively small area, within Kings Bay.

In volcanic districts, however, the colouring of the rocks is almost always remarkable. It seems as though Nature had emptied her whole palette upon them. Hardly any tint, from white to black, is missing. Other mountains depend for their colour upon the atmosphere. These are independent of that source. Their own colour is predominant. All they ask for is transparent air and bright sunshine to display them. Their combination is so unusual, their chord so unlike any to which we are accustomed in ordinary natural surroundings, that they cannot fail to be the chief element in the view. That is why photographs of volcanic scenery convey an impression so different from actual sight. The normal blues, greens, and browns of the temperate habitable regions; the black, greys, and whites of the

snowy world; the blue sea, white sand, and red cliffs of a Devonian coast: such chords of colour are usual; the eye expects them. Even a tropical landscape, except for its occasional blazes of blossom, belongs to the same category. Autumnal glories, first of golden harvest, later of iridescent foliage, are an accustomed sight. But all these schemes of colour belong to a wholly different category from that which volcanic rock-masses display. They bring together, combine, and contrast a whole series of unusual tints. Their purples are not the purples which we elsewhere know. Their greens are not the greens of vegetation. Their yellows are not the yellows of a blossoming field or a fading forest.

Were I to catalogue in a list the colours I have seen in a volcanic panorama, it would little serve, for it is not the names that count but the special significance of each, and that is not capable of brief statement. Such a scene as I am recalling astonishes by the multitude and close juxtaposition of an apparently countless number of coloured strata. It looks as though Nature had kept changing her mind and staining each successive ejection with a different tint. Sometimes there comes a considerable thickness of a certain

coloured rock, but above and below it thin strata will succeed of all sorts of colours. If such a series of deposits is intersected by a cliff, its face will be ruled across by a polychrome multitude of bands. Oftenest, however, the whole mass will be riven into gullies and weathered into pinnacles of all heights and varieties. Or short cliffs and elbows will alternate with slopes of debris. In such cases any sense of order in the succession of colours may be lost. A blue pinnacle will stand before a yellow one, and that beside a red with a green top. In one buttress purple may predominate, in another grey, in a third orange.

The effect on slopes of debris is often most peculiar. Naturally they derive their tint from that of the rocks above, out of whose fragments they are formed. If those rocks are a mass of a single colour, such will be the tint of the debris slope. But if they be fed by the splintered fragments of two different beds, as for example one red, the other yellow, the slope below will be a kind of orange, varying in tone according to the supply of the two ingredients. Sometimes a slope will be, let us say, purple throughout its upper portion till it comes down to a point where white rocks

emerge. Below them it will be streaked as by splashes of whitewash. In the floor of a valley, where all these ingredients mix together in sandy intimacy, the general tone will be of a light neutral tint, the colour being destroyed by the intimacy of the mixture, the minuteness of the fractures, and the multiplicity of the incidence and reflection of light.

Where there is snow aloft its melting will enforce the local colour of the rocks or debris over which it flows. Similar will be the effect of a spring bursting out of the hillside. These waters will themselves be brilliantly stained, and if they chance to flow over a bed of snow, they will stain it in their turn. I have seen a blood-red area of snow produced in this fashion.

The reader may not derive from the foregoing description an idea of any effect produced by the reality save strangeness. One should be a landscape-painter of remarkable skill to convey any other. But the actual effect in nature, when the first shock of strangeness has worn off, is an effect of remarkable beauty. The colours in their great variety and multitude do in fact harmonise and agree together. Being fashioned in one work-shop, the work-shop of Nature, the self-same that

fashions the eyes and intelligences of men and implants in them the idea of beauty as part of nature's law, they do not appear chaotic or inharmonious to the natural man. On the contrary they are bonded together and informed by the sense of a common origin, a common purpose, and a common meaning. When this unity is felt and perceived by the eye, not only do the forms, for all their jagged and splintered multiplicity, harmonise into compositions of remarkable grandeur, but their rich and varied colouring ennobles and distinguishes those forms.

Views of this kind affect the imagination and impress themselves upon the memory more than most. Amongst the many wide vistas or actual panoramas which a mountain-climber of a few years' experience must have seen, he will doubtless freely admit that there are few which he can recall to his memory with any completeness. The first he ever saw overwhelmed him with their intricate elaboration. Later on, when he knew better what to look for, his susceptibility to impression was already lessened. The same is likely to be true of valley views. How many of them can we conjure up in any detail? The Matterhorn from Zermatt, Mont Blanc from

Chamonix, and a few other similarly well-known prospects we know by heart; but of how many valley views, that we have only beheld once or during a short interval, can we form a visual image in our minds. My own experience leads me to conclude, though without making any allowance for a possibly large personal equation, that desert views are more memorable than those in which fertility predominates. Various views in the naked Indus valley are firmly fixed in my mind, though none of them were more than briefly beheld. The same is true of the scenery in the desert volcanic regions with which I am acquainted: the neighbourhood of Arequipa in Peru, parts of the provinces of Oruro and Potosi in Bolivia, the surroundings of the volcanoes of Ascotan in Chile, and of Aconcagua in the Argentine. In all these districts the scenery I beheld remains photographed in my memory with exceptional vividness, not merely its strangeness but its beauty, and the element in the scenery most vividly memorable is the element of colour.

In fact both colour and forms are strange to an eye accustomed to look upon the fertile and normally habitable regions of the earth. This is true not merely of the mountains themselves and their

constituent parts but of all their surroundings. I have never looked down upon the boiling interior of an active volcano, such as travellers to Hawaii are privileged to behold on the top of Mauna Loa. That must be a sight passing wonderful. Nor have I ever beheld an erupting volcano from near at hand. But I have seen enough in the volcanic districts of South America to realise the marvels and fascinations they contain. Let me be forgiven for quoting one or two passages from my book on the Bolivian Andes, which were written when the impressions were fresh, though not a detail of them has yet escaped me.

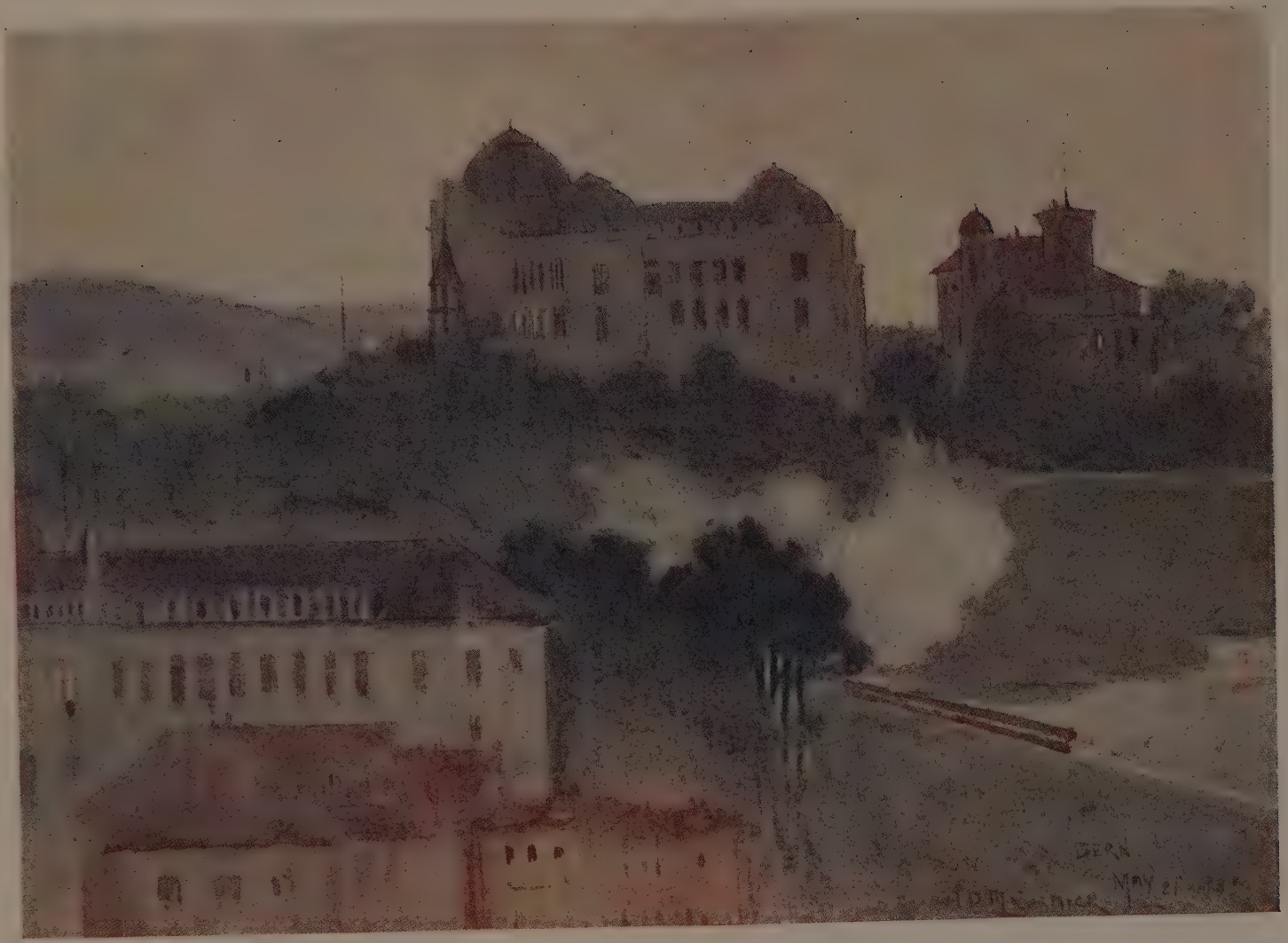
Near Ollague, on the Chile-Bolivian frontier, is an active volcano. It was puffing steam in white jets from its top when I passed. All the hills and ground beneath, utterly bare of vegetation, were red or yellow in colour, or of white ashes dotted over with black cinders. Proceeding southward for some 200 kilometres, this kind of scenery continued. We wandered in and out among volcanoes, lava-streams, and great level sheets of white saline deposit, like frozen lakes covered with snow. Most of the volcanoes were extinct, but some retained the perfection of their form—wide, infinitely graceful cones outlined

by a pure unbroken curve against the clear sky. The surface of the hills was often coloured in the most brilliant fashion imaginable. The combinations of the rich colours and strange forms rising beyond, and apparently out of, the large, flat, greyish-white surface of the saline deposits were most beautiful. One white imitation lake was framed in a margin of black volcanic dust and cinders, merging upward into grey sand. White dust-spouts were dancing on its white floor. A riven hill near by revealed streaks of blood-red, chrome yellow, and I know not what other bright colours.

Presently came the smoking volcano San Pedro, with a smaller cone at its foot, from which there stretched to a distance of two or three miles a flow of lava, long cold, but looking as it lies on the sandy desert as though newly poured out. It resembled a glacier with steep sides and snout much crevassed and all covered with black moraine. With this strange product of volcanic convulsion for foreground, the sunburnt and silent desert stretching around, and volcanoes great and small rising behind, San Pedro's head smoking over all, I thought I had never beheld a more weird and uncanny scene. Yet it was

AFTER THE SUNSET

From the Schänzli, Bern.



beautiful, beyond all question beautiful to a high degree. If a man could be transported to the surface of the Moon, say somewhere near Aristarcus or Gassendi, such, I imagine, might be the kind of landscape that would salute his eyes.

Over against these mountains there rose on the other side of the valley a polychrome hill, the Cerro Colorado, covered, they say, with magnetic sand, which leaps into the air and flies about in sheets and masses when a thunderstorm comes near—to the very natural horror of the local Indians. At such times, amidst the roar of thunder and the electric flashes, surrounded by a desert shaken by earthquakes and dotted over by cinders, and with this dancing fiend of a hill close at hand, ignorant people may be pardoned for imagining themselves possessed by a horde of rioting devils.

Not far away is the blood-red cañon of the Rio Loa, 360 feet deep. I stood at the edge of this profound meandering trench at an hour when the low westering sun struck full on one face of it and a dark shadow fell from the other. With this sanguinary hollow at my feet, I looked across a great flat plain towards countless volcanic

hills, many of them perfectly symmetrical in form, shining in the mellow evening light. The sunset is the time to enjoy to the fullest this clean lunar landscape, enriched by the world's fair atmosphere, when the shadows are stealing across the flat and climbing the opposite crimson hills, whence they seem to drive the colour up to the soft still clouds, where it fades away in the purple pomp of oncoming night.

Is it possible, I wonder, by any words to convey to the reader the least notion of this sort of scenery? Picture to yourself a lake the size of Zug, or Annecy, or Orta. It is not a lake for all its flatness and the aspect of its shores, but a flat plain of salt, white as snow. Its banks and surroundings are not green, but wide-spreading sand, that stretches away and yet away till it vanishes perhaps into trembling mirage. Black spots are dotted all about as though newly scattered from some enormous pepper-pot. They are ashes. You can scarcely believe they are yet cold from the fire, that ejected them, however, ages ago. Yellow, crimson, green slopes rise nearer or farther away to form stately cones or ruined lumps of the crude earth. Alas! the picture is not paintable by me. Beheld, it smites the eye with

a single indelible impression. Described, it is a mere succession of details and fragments, and there is no verbal lightning-stroke that will avail to smite them for an instant into simultaneous visibility.

Strictly speaking, what has been written above has no place in an Alpine book. Yet the interest of the Alps to me, or of any range of mountains, lies in the fact that they are a specimen range, that they resemble more or less other ranges from Arctics to Tropics, that they are examples of one large category of mundane phenomena. To understand the position and character of Alpine scenery in the scenery of mountains, we must consider what the Alps lack as well as what they possess. Every range of mountains, indeed, has its own special and purely local elements of character, but outside of them it likewise possesses many more in common with other ranges. The experienced Alpine climber will find himself, if not at home, at all events not far from home in the mountains of Spitsbergen, Greenland, or the Antarctic, in the Caucasus, the Himalayas, the Canadian Rockies; even in the snowy Cordillera of tropical Bolivia, or in the African groups of Kenya and Ruwenzori. The only kind of mountains, so far as I know,

that will be wholly strange to him, and at first sight almost wholly incomprehensible, are the desert volcanoes. It has been for the purpose of bringing this fact clearly before his mind that I have felt myself justified in devoting a brief space to the character of such volcanic scenery.

THE END

Printed by R. & R. Clark, Limited, *Edinburgh.*